

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

{ STAMPED.....SIXPENCE.
{ UNSTAMPED..FIVEPENCE;

MANCHESTER,
M R. W. HANNAM, MINING, SLATE QUARRYING,
 INSURANCE, AND GENERAL SHAREBROKER,
 ROYAL INSURANCE BUILDINGS, KING STREET, MANCHESTER.
 A Monthly Investment Circular on application.

Original Correspondence.

COAL-CUTTING BY MACHINERY.

Sir,—The trial of the long-looked-for machine, invented by Mr. J. G. Jones, of 53, Cumming-street, Pentonville, London, took place at Blairston Ironworks, Monmouthshire, on June 9, and the result proved of a most satisfactory character. There were present one or two gentlemen and engineers from Yorkshire, and others, all of whom pronounce it to possess far more advantages than any machine out, its striking peculiarity being that the pick can be made to work in any direction whatever under the control of the man working the machine. I am sorry, Mr. Editor, that time will not permit me at present to write you a more detailed account, but which, doubtless, will soon find its way to your columns.

June 14.

OBSERVER.

RECENT COAL-CUTTING PATENTS.

Sir,—I have noticed with particular interest the several statements and reports which have appeared in the Journal of late on "Recent Coal-cutting Patents," and as this subject is one of much importance to the mining world, and one with which I am well acquainted, I trust you will allow me a small space in your next issue for a few remarks thereon. In the first place, I will call the attention of your readers to the letter signed "The West Ardsley Company," in the Journal of the 4th inst., as it is only from such a company that a true statement might reasonably be expected, and especially as they offered to correct the reports of others on the same subject; and, had I not been well acquainted with the West Ardsley Company on this matter, both now and at the time when the machine was first introduced to their colliery, I certainly should have believed, like many others, that the several statements in their letter were true, and that the West Ardsley Company were really entitled to the credit they claim, and to the sympathy of the mining world for their trouble and large expenditure complained of. However, I trust that I shall be able to show to your readers that many of the statements put forth in their letter are far from being correct, as the explanation they give of the introduction of the first machine to their colliery is a very unfair one, both to myself and Mr. Ridley; for, in point of fact, the machine they state as being practically a failure is the same patent coal-pick they have so often represented to the public as doing so well at their colliery; and this machine was invented by Mr. Ridley and myself, and patented March 30, 1861, No. 795; and this patent is practically the mother of both Ridley, Firth, and Donisthorpe's patent, and Ridley and Jones's patent, of which we have heard so much lately, one at the Hutton Colliery, Durham, and the other at the Broom Hill Colliery, Northumberland; and it will be evident to anyone who would take the trouble to look over the specification of the patent of March 30, 1861, Ridley and Rothery's patent, that neither the Hutton machine nor the Broom Hill machine can be worked by their assumed inventors absolutely, and in the face of the mother invention of March 30, 1861.

In proof of this, on referring to the patent of November 26, 1861, Ridley, Firth, and Donisthorpe's patent, No. 2977, we find at page 5, and paragraph 30, it is described that the specification of Ridley and Rothery's patent, March 30, 1861, is sufficient for that part of the specification referred to in Ridley, Firth, and Donisthorpe's patent; consequently it will be evident that the specification of Ridley and Rothery's patent, and Ridley, Firth, and Donisthorpe's patent, must rely upon each other in point of law, and the same may be said in reference to Ridley and Jones's patent of June 8, 1863, which is known by the name of the trunk machine: here, again, in this machine is nine parts out of ten of the mother machine of March 30, 1861. Certainly the introduction of the trunk cylinder, as a prime mover, is a great advantage over the old arrangement of cylinders for working the machine, for, by the introduction of the trunk cylinder, the length of the machine is considerably reduced, and the machine is more portable, and more easily taken round the sharp bends and corners of the workings. Another advantage is, the trunk economises the power required for the return stroke, but even the trunk cylinder would have been absolutely useless had not the other cutting arrangements of March 30, 1861, been completed, and well adapted for any prime mover as a power to work it.

Now, on referring again to the West Ardsley Company's letter, they say that the Hutton machine is their property, and protected by their patent of November 26, 1861; this statement is positively incorrect, for this patent was taken out by Ridley, Firth, and Donisthorpe, as before stated, and I may further say, that there is no patent on record in the name of the West Ardsley Company relating to coal-cutting machines. How they have fallen into this error is best known to themselves; and I am at a loss to conceive, in the face of the above facts, on what grounds they can request the credit for the invention of the coal-cutter to be awarded to them, as they have done in their letter. This looks very ambitious, and, in my opinion, is not in accordance with the old proverb, "fair play is a jewel;" and I trust, before the public give their verdict on this point, they will well consider the matter over.—*Pinston, Pontefract, June 16.*

J. ROTHERY.

THE DISCOVERY OF COAL IN BRAZIL.

Sir,—In last week's Journal there is an article, from a correspondent, commenting upon a letter of mine which appeared in the *Brazil and River Plate Mail* of June 7. I am very much amused at the unusual amount of interest in my brother's and my personal welfare which your correspondent displays, and especially at his anxiety to preserve us both from falling into error, either from misstatements of facts, or from an untimely elation at the prospect of becoming "millionaires in scarcely more time than would be necessary to float a (bubble) company." One ought to be deeply thankful to such a critical friend as he might appear to others to be, but his personal interest is a little too pronounced, as the French would say, and one has to ask the reason for such a display of feeling and anxiety? or else to conjecture motives by a local knowledge of his peculiarities. At a glance through his article, "The Discovery of Coal in Brazil," I see that he knows no more of the Brazilian coal discovery than what he has derived from information which I myself have given to the public, and that he does not possess an additional fact, or a scrap of original matter, to send to your columns upon the subject he writes about. The letter which he appears to be so anxious to bring before the notice of the readers of the *Mining Journal* was written to deny a specific claim from a Dr. Freire, which had appeared in Brazilian papers; and if your correspondent had been honest, instead of *ex parte*, in his selections from that letter, he would have given the *postscript*, which settles the question of claim by Dr. Freire's own admission of mistake.

If it be not against your rules, I would ask you to be kind enough to insert my letter to the *Brazilian and River Plate Mail*, of which I enclose a copy. I think it is only fair to your readers to see this letter *unmutilated*, and I leave to them to judge of the "reasons" which moved your correspondent to use it so pointedly and personally to my brother and myself.

I shall be most happy to supply you with much additional information upon the Brazilian coal discovery if you think it interesting; but for the present I am requested by my brother to retain the matter in hand until I receive the completed report of his exploration; but I may, perhaps, be free to say that this discovery is no exception to the fate of most first discoveries of other good things in their way, and the honour of first finding the Jaguaras coal field may, after all, not belong to the late William Boulicch, but to a party of explorers, who published at Rio a report in French, some 20 years ago, which bears the names of a Frenchman and of a Prussian. In a country like the vast empire of Brazil, possessing no recorded history (excepting religious and military), the claim of anyone, coming after the enterprising and penetrating Jesuit missions, to "first discoveries" might be received with reservation, or accepted, as the Brazilians at Rio Grande, in 1862, accepted the report of the Jaguaras coal, as both important and new to them.—*June 14.*

JOHN PLANT, F.G.S.

THE BRAZILIAN COAL MINE ON THE JAGUARAS.

Sir,—In the *Brazil and River Plate Mail*, of April 7, was an extract from the *Journal do Commercio* of a communication from Dr. Rinaldo Menezes Freire, the purport of which was to object to the correctness of some of the facts and data supplied by myself, and relating to the Jaguaras coal field. He especially objected to an article which appeared in the *Times*, and concluded with asserting that he (Dr. Freire) and the Senhor Louis Boulicch held the Imperial concession of the mines; but, kindly considering "that the notable perseverance and labours" of my brother, "Mr. Nathaniel Plant, were beyond question, he would be entitled to a generous indemnification from the concessioners."

As I had possession of more information upon the Jaguaras mines than anyone else in England, I felt inclined to question the truth of this last assertion, and on immediately searching through my brother's letters, I was surprised to find that whilst mentioning the names of many Brazilians whom he had come in contact with in his fourteen years' residence in Brazil, he never once mentioned that of Dr. Freire; nor does the name occur in the printed report in the Brazilian papers; nor in the Imperial decree for exploring the mines, Feb. 6, 1863; nor in the decree granting the concession to Senhor Louis Boulicch, Oct. 9, 1863; nor in the decree granting the land, March 29, 1864; in

fact, the name was as strange to me as were his facts about the coal mine or its history, and I, therefore, forwarded your paper to my brother at Rio Grande, requesting his attention to Dr. Freire's statements.

By the last mail I have received a reply from my brother, together with Rio Grande papers of the dates of March and April, containing protests and denials as to demolish for ever the fictitious claims of Dr. Freire to be regarded as one of the concessioners of the Jaguaras Coal Mine.

It will not be necessary to send for insertion a translation of the whole of these articles—their purport is significant and clear. The first shows that the Imperial concession of the Jaguaras Coal Mine is to Senhor Louis Boulicch alone, and that he has legally privileged the same to Senhor Nathaniel Plant and Senhor Colonel Thomas José de Campos, these two last-named being, in the eye of the Brazilian law, sole owners of the power to work the mines. Another article is directed to prove that the Brazilian coal reported upon in the International Exhibition by Dr. Percy and Robert Hunt—to which report, perhaps, Dr. Freire may allude in his communication—was coal sent by the Viscount de Barbacena from the thin surface coal beds in the province of Santa Catharina, and not coal from the Jaguaras Mine in Rio Grande, so that it may be that the unfavourable report upon the coal in the jurors' report was well deserved. I am unwilling to waste time and your space in replying to all the misstatements of Dr. Freire, especially as he will by this time have received a copy of the paper read by me at the Manchester Geological Society, in which the honour of the first discovery of the coal was not claimed for my brother, but justly given to the late William Boulicch; that my brother is not an engineer, but a geologist; and that I never stated the coal shown at the International Exhibition to be of inferior quality; or that Mr. Smyth was ever engaged to survey and report upon the coal mines. It may be that some of the condensed paragraphs in the newspapers have conveyed erroneous impressions, which will not be borne out in my original paper.

In conclusion, I may say that the geological exploration of the Jaguaras coal field is now completed by my brother, and that he has discovered thick beds of Cannel coal, as pure as any ever raised from the mines of Wigan; the intervening beds of ironstone and shale are also rich in true carboniferous fossils. Mr. W. J. Smyth, the railway engineer, has finished his survey for a railway to the coal mines, a distance of 50 miles, in a direct line; but his track traverses a district over 100 miles in length. His estimate of the coal is 700,000, upon which it is anticipated the Imperial and Provincial Government will guarantee 7 per cent. No estimate for the coal mine has been definitely fixed. My brother, Senhor Campos, and Mr. Smyth, are now at Rio Janeiro to lay their report before the Government, after completing which the project will be brought to England about the end of August.

JOHN PLANT, F.G.S.

Royal Museum, Peel-park, Manchester, June 2.

P.S.—In a private letter my brother states that Dr. Freire has acknowledged his mistake about the concession, which arose out of some private business transactions with Senhor Boulicch.

Editor's Note.—Mr. John Plant, F.G.S., writes to us to contradict certain statements made in the *Journal do Commercio* of Rio de Janeiro (reproduced in our number for April 7), disputing the possession by Mr. Nathaniel Plant of any right in the concession of the great Brazilian coal field of Jaguaras, recently brought prominently before the English public in a paper read before the Manchester Geological Society. This assertion was made by Dr. Freire, who, however, has since acknowledged himself to be in error. We direct attention to Mr. Plant's communication, which will be found inserted in another part of our paper.

PREVENTION OF COLLIERY ACCIDENTS.

Sir,—My letter on Ventilation is not at hand, but I think its tenor is that I deprecate splits of a colliery, as involving the necessity of splits of the air. In the *Journal* of June 4, Mr. Fairley mentions the name which uniformly turns up in such questions—Mr. Buddle. On a survey at his main work, Peshir, I had access to the working plan, and with surprise saw the needless necessity for the numberless splits of the air. Under this view I do not fall in with Mr. Fairley's term "districts of working" in one and the same colliery, or with the theory that the whole product of foul air in a colliery cannot be best overcome by the whole current of air being passed around the whole waste. The roof, where it is possible, is flat, and almost unbroken down on the floor, &c. I hold the stall system requires tenfold the "number of doors" long work does.

As to the main questions of the two systems "quantity landable daily," the faces right and left may come out once or twice daily by the latter; and it will involve "districts," indeed, to do more by short work. As to doors "left open," had my letters been published "intact," that and other points would have been provided for. Trains will open doors both ways, and a pendulum keep them firm in the centre when closed. That "each split must be of sufficient force to remove all foulness," is begging the whole question. The letter of Mr. Fairley ignores nearly the whole of mine; and I believe I could not better reply to it than by saying—"Read it fairly, and do not rely on common colliery cant in reply to it." My letter would also have shown that I contemplated an air-pit when the opening headings had reached the upper side of the "winning," which supposes one split, and disposes of the most imposing objection to my mode proposed, the "length" of the current rounding the whole waste. But does not two roads of equal size, instead of one, involve half speed of the air between the down and up-cast shafts? As hydrogen will vent to the airway or upper side of the waste, the foul air will not, with an air-pit, pass the men at work. And this brings us to the question of whether Government should not allow a single and divided shaft, until the headings come to the said upper side of the winning for up-cast shaft. As to his having seen long work abandoned, a man can do something when he knows how. There are roofs so strong that it is, perhaps, impossible, and more costly. As to "filling up the gobs," my letter stated we had no filling or packs in the long work banks of Ling's and Tupton, near Chesterfield, the latter a 5-ft. seam. I spoke of roads in the waste without pillars of coal, as a new fashion, but not a yard of coal was left for a day, even around the shaft at some works in Derbyshire a century ago. I was at Tinsley Park Colliery, Sheffield, a youth, to set out long work, then rejected, but established half a century after. If Mr. Fairley could quote "many able authorities on splitting currents of air, I never read a book on mining, or saw a mine, except on business in it; and one who has sold his 1000 tons of coal daily at New York, at 14s. per ton, and now gets 32s., giving the income of a rich English duke, says the same. I never met an underground agent who could say what fall his pit trams required on his road (as both were) to give equal work to the horses inward empty and out-laden; in practice about the most useful matter to know. Leases should allow that fall along deep side roads, and no greater.

Bank-street, Sheffield.

T. BUTLER.

DISCOVERY OF SLATE ROCK IN MERIONETHSHIRE.

Sir,—As everything relating to slate discovery must, owing to the immense demand, and the high premium of the produce, be of decided interest to the whole mining community, I venture to send you a brief account of a valuable discovery in the above part. There is one thing relative to the primary, or non-fossiliferous system, that must ever prove a great obstacle to geologists—that no conclusive and satisfactory theory can be formed of it, so as to guide us in different circumstances. Indeed, every vein of slate seems to carry with it its own theory. I am intimately connected with several, and, by inspecting, partially acquainted with many of the English as well as Welsh quarries; yet I cannot call to mind any two in which the leading features are the same. The reason for this is obvious. As the clay-slate is intimately associated with the gneiss and mica-schist groups, and as igneous intrusions have caused great upheavals and disruptions to this strata, we may very reasonably infer that the clay-slate strata would be similarly affected. Such is the case. It is also equally as clear that these changes will be different under different circumstances, and hence the difficulty of forming a complete theory. I will mention one instance by way of illustration. A little to the south of Craig Ddu Quarry, Festiniog, there is an old quarry opened on the same vein. The strata at the old quarry lies in an angle of about 40°, while at Craig Ddu it lies quite flat. It appears there has been an upheaval just at the spot where the old quarry has been opened, as the strata falls in an opposite direction just beyond the old quarry, forming what is called a "saddle." After the strata gets out of the effects of this upheaval it lies flat, as seen at Craig Ddu. But, strange to say, the strata at the Craig Ddu Quarry, all of a sudden, owing to some internal change, sinks down 10 or 12 yards, without affecting the run at all. Every layer can be traced where it is sunk to correspond with the layers from which they sunk. Of course the upheaval at the old quarry rendered the rock so small, and crushed it in such a manner, as to make it useless; and had the proprietors known a little about geology they would never have ventured a penny on the spot. But I did not intend to enter thus far into the question, and must commence my subject. I consider the present discovery a very important one, inasmuch as it may lay open a large field for profitable speculation, to which no attention has yet been paid. The vein is from 23 to 25 yards wide. The present workings on it are about three miles from Dinas Mawdy, on the road to Llany Mawdy; it can easily be seen from the turnpike road. I have heard some suggest that it is the same as the Corris and Aberllefenni veins; but this, for several reasons, I rather dispute. The vein is wider than those generally are, the slates are of a much finer texture and blue colour, and the bearings do not coincide. However, I own that the vein in the distance between the two places may widen, and undergo several changes. This vein has a great many of the essentials to make an excellent quarry; the cleavage is good, the blocks can be split into very thin plates, and the quality is tough and durable. The vein runs through the mountain in such a way that the quarry can be uncovered. There are advantages for driving tunnels to work the lower galleries: the depth is good, about 300 yards, with plenty of deposit for the debris. Water power can be had with little expense, and an

incline can be made from the quarry down to the turnpike-road; this would cost but the bare materials, and as the railroad will be made to Dinas there would be but three miles' carriage to the station. With all these advantages, if the quarry were worked by a spirited company, there can scarcely be a doubt that the ultimate results would prove most satisfactory. Mr. Robert Pugh Jones, and one or two others, the present proprietors, have opened on one part of the vein only, and slate of beautiful description has been dug from there.

SAMUEL JENKINS,

Quarry Inspector.

Dinas Mawdy, June 13.

ELVAN COURSES, AND THEIR INFLUENCE ON LODES.

Sir,—A month or six weeks ago some enquiries were made in the *Journal*, by "Amateur," as to the influence of elvan courses on lodes, which I regret were not answered by any of your correspondents. The subject is one of much practical importance, and its discussion in your columns would, I have no doubt, be attended with useful results. But before entering upon it we should clearly understand what an elvan course really is. Probably Cornish miners may think it wholly unnecessary to describe an elvan course, for they know the rocks to which the terms is applied, having worked in them from childhood. But we do not all live in Cornwall, and I have many times heard of elvans in mines, where the conditions in which they are found in Cornwall do not exist. That I may not be misunderstood, let me explain. A very high authority, in speaking of elvans, says—"They are obviously veins derived from the granite, since that particular kind of rock (elvanite) only occurs in districts where granite also occurs, and they are generally more numerous as we approach the granite." Assuming this definition to be right, when I hear of elvans in Cornwall, or in some parts of Ireland, I have a complete and definite conception of the rock—its mineralogical character and the conditions under which it is found; but when elvans are spoken of in districts where there is not a vestige of granite, I am at a loss to understand what is meant. There is evidently some confusion in the application of the term, or it may be that it has a broader meaning than I am conscious of. At any rate, before we consider the influence of elvan courses on lodes, it would be well to remove the difficulty I have stated; and I should feel obliged if some of your correspondents would explain to us what elvan courses really are, so that we may be able to draw from our enquiries reliable conclusions as to their influence on lodes. I do not approach this subject as a controversialist. Having no personal ends to serve, my sole object is the diffusion of sound practical knowledge on mining and its collateral science.

H. D.

June 14.

MINING ANOMALIES.

Sir,—Your correspondent in last week's *Journal*, writing on this subject, should have also alluded to the present market value of some of the lead mines as well as copper mines—for instance, West Chiverton selling at 210,000l., and paying a three-monthly dividend of 15s. only; whilst Chiverton selling at 32,000l. until recently, for many years abandoned, being 80 fathoms deep in course of draining the water; where heavy calls will have to be made, and when drained, the bottom of the mine will be found poor; Westworth Consols selling at 45,000l., on a parallel lode just below the adit level, making no returns; whilst East Chiverton is selling at 8000l. only, and embracing all the lodes of the foregoing mines, with equal prospects. As a contrast, take the lead mines in the Liskeard district—Herodasfoot selling at 38,000l., giving regular dividends of 35s. per share; Mary Ann selling at 15,000l., giving 10s. dividends; and Trevelyan selling at 19,000l., giving a three-monthly dividend of 12s. 6d., being established dividend mines, with every prospect of a continuance. Such a fallacious difference, as to the intrinsic value of these mines can only be accounted for by the combined efforts of parties interested; but as to their respective merits for the legitimate investment of capital, as a commercial enterprise, I leave the *bona fide* investor and the mining community to judge.

ANOTHER OBSERVER.

June 15.

THE WHEAL TREEBY MINING COMPANY.

Sir,—Men of business, and men of principle, who are acquainted with the practice carried on, too often with impunity, in mining as well as in other public enterprises, will thank Mr. Paull and Mr. Berry for their exposure of the Wheal Treeby mismanagement—reports of which have appeared in the *Journal* for March 26, and June 4 and 11. Mr. Paull's letter, in last week's *Journal*, gives a finish to the affair, by fixing the blame on the right party; but, as a case affecting the reputation of cost-book management, it deserves more than a passing notice. When Pursers, of their own accord, or in conjunction with other shareholders, divide amongst themselves any balance of cash remaining upon the suspension of the works, the cost-book rules, which take root on the common partnership principle, are unquestionably violated. It is the Pursers' duty to prevent any such irregularity, by calling a special meeting of the shareholders, and to record the proceedings in the minute book. No such record exists in this case, and hence the complaint by the shareholders, through Mr. Berry. There was, of course, a good reason for such non-entry of what is decidedly an illegal transaction. With respect to the other matters in dispute which are noticed in the reports alluded to, they tend further to show the unsatisfactory nature of the management of the company's affairs; but my object is to point to a particular feature which bears on the general interests of cost-book mining, as a warning to other companies. It is to be hoped that Mr. Paull and Mr. Berry will follow up the case, for the sake of those home enterprises which rarely fall into such able champions. Mr. Berry is especially known for his independent spirit in the advocacy of the mining interests, and I rely on his acting upon the hint he dropped at the meeting, as to a further exposure of the irregular proceedings in this case.

H. D.

BIRCH TOR MINES.

Sir,—In the *Journal* of April 30 you were kind enough to insert a letter from me, and in the same *Journal* appeared also a letter from Capt. Wm. Skewes; and, from the apparent desire therein expressed for a meeting on the mine, I expected forthwith to have heard from him, for the purpose of making some arrangement for that purpose. Not having done so, on May 3 I sent him, by special messenger, a letter, of which the following is a copy:—"Horbridge, May 3: It was not until last evening that I had a sight of the *Mining Journal* of last Saturday. If you had said to me some early day last week what you have inserted in the *Journal* of last Saturday, it would certainly have prevented the appearance of my letter, and might, perhaps, have saved you the trouble of sending yours to the *Journal*. I believe it now only remains for us to fix on a person to carry out what appears to be the wish of us both.—J. Leas." This was constantly delivered by my messenger, and to which the reply was—"There is no answer." I again wrote him on May 23—"It is now nearly three weeks since I sent a note to you by a messenger, so as to make sure of its delivery, in reference to your letter inserted in the *Journal* of April 30, and to which note I expected a reply, but have not yet received any. I hope to get this in the course of a day or two, and to be thus saved the painful necessity of asking the Editor of the *Mining Journal* to give insertion to copies of my recent letters to you on this subject.—John Leas." To this also I have received no reply; and it is under these circumstances that I feel bound to request the favour of your kindly giving insertion to this, as the only course I have left for bringing our differences to an issue, unless, indeed, I could consent to sit down with serious charges resting upon my character. I have sought by all means in my power to avoid again troubling you in the public in this matter, who, generally, can have little or no interest in it, but I have no other recourse left me.

JOHN LEAS.

THE MARAZION DISTRICT.—The so-called Marazion district is a basin of clay-slate, schistose, or killas, traversed by porphyritic courses or channels of strata, running nearly in an east and west direction. This basin or channel of ground, so long celebrated for its rich deposits of tin and copper ores, may be said to commence with the old Darlin Mine, north-west of the town of Marazion, and extending east of this mine for about 2000 yards, and thence east as far as the Alfred Mines, and south, in all probability, to the several miles beyond St. Michael's Mount, which is an island or rock, rising above the sea some 400 ft. in height. The south part, or two-thirds of this island, is composed of granite, and the north part of clay-slate; at low water-mark branches or strings of the grey carbonate of copper ore may be seen, some of which are several inches wide, cropping up through the granite strata or rock; these branches, some 20 or 30 in number, appear to form a junction to the east of this island, and form one great lode between St. Michael's Mount and the beach or sea-coast, to the east of the town of Marazion, and which, in all probability, may give employment to several thousand labourers in a future day. This island is about one mile in circumference, and has an enclosed harbour, capable of affording accommodation to about 50 vessels, up to 300 tons burthen. The trade is principally of the import of coals, iron, and timber, the export that of copper ores. Formerly extensive fisheries were carried on in this port, principally that of pickarads. This little island, no doubt, the hoary rock in the wood, or *Jetas*, handed down to us in history. This basin may be said to be surrounded by granite hills for several miles in extent, from the promontory or head of land, known as Trewas Head, a little to the south of the Wheal Vor district, to a point of land called Mouse-hole island, and is about eight miles distant. Immense deposits of the richest description of the grey carbonate and yellow sulphate of copper ores have been found in the Marazion, or Mount's Bay district, very near the surface, and large fortunes from time to time have been realised by the fortunate adventurers; and, like all other districts, meet with reverses, as large deposits of minerals are sure to be followed by very hard channels or strata of ground; and until recently we have possessed the courage and perseverance to go ahead. Two instances during the last few years have occurred, that at the Alfred Consols Mine, near Hayle, and the Tolvaaden Mine, near Marazion: the former, after persevering for about four years, with an outlay of some 15,000l., returned a profit to the adventurers, after paying back the outlay, of about 99,000l. the following seven years. Some of the very richest mines in Cornwall have been abandoned twice or thrice for their poverty; to wit, the Trewas Mine, Great Consols, and Wheal Vor, are instances occurring within the last few years.

THE PRICE OF COPPER.—The brass foundry trade have resolved not to increase their discounts in consequence of the recent fall in the price of copper. They are convinced that, in a very short time, copper is just as likely to go up again in value, and in that case the labour and inconvenience of altering the discounts would have to be gone through again. Indeed the feeling of the trade, we understand, is in favour of acting in this matter independently of the movements of the copper smelters, as they consider the fluctuations in the price of copper due rather to the caprice of the Speculation Union than to those principles of demand and supply which should determine the rise and fall in the value of the metal. Since Christmas five alterations in the price of copper have taken place in the course of as many months; and the brassfounders consequently feel that the interests of their own trade will be best consulted by the exercise of firmness in their part. Hence the determination which we have been requested to announce on their behalf.—*Birmingham Post*

THE LUMLEY RUDDER.—Mr. Lumley, patent agent, Fleet-street, has just filed the specification of Mr. Lumley's patent, for improved arrangements in connection with his rudder. According to this patent, he proposes to obtain the necessary movement of the afterpiece by arms, joined or otherwise, connected to the ship, and to work in and out, or to and fro, or by post rod or axis, engaged in a slot or grooved bar, the axis working in the slot, or the slotted bar moving about the axis.

Figure 1. The effect of the concentration of the H_2O_2 solution on the amount of the released H_2O_2 from the H_2O_2 -loaded hydrogel. The amount of the released H_2O_2 was measured by the amount of the released H_2O_2 from the H_2O_2 -loaded hydrogel. The amount of the released H_2O_2 was measured by the amount of the released H_2O_2 from the H_2O_2 -loaded hydrogel.

LINARES.—June 4: Pozo Ancho Mine, West of Engine-Shaft—**100** fathoms. In the 110, west of engine-shaft, the lode produces good stones of lead. The 95, west of No. 129 winze, is improved, worth 1½ ton per fathom. In the 85, west of Martin's winze, the ground appears more broken and jointy than it has been, and is letting out much water. The 61, east of Laidoro's winze, having proved unproductive for some length, and the present appearance of the lode being unkindly, we have suspended it. In the 61, west of Santana's winze, there is still a splendid lode, worth 4 tons per fathom, but the water has prevented our working it for several days past. In the south side of the 51, west of Crosby's shaft, there is a good branch of lead, worth 4 tons per fathom. In the 41, west of Crosby's shaft, the lode is not so good, but more hard for working. In the 110, east of Crosby's shaft, the lode is not so good, but more hard for working. In the 110, east of Crosby's shaft, the lode is not so good, but more hard for working.

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engine-shaft about 35 fms. below the surface; this lode is underlying south 3/4 in. a fathom, and is cut into 18 in. of composed of spar, capel, mundle, with spots of quartz, but the north wall is not yet discovered. We purpose to continue the sinking of the shaft 2 fms. deeper previous to fixing the new 11-in. plunger-lift, 1 fm. for which the present contract is 240. per fm. There is nothing new to report upon the lode at the 36. All points in that portion of the mine are progressing satisfactorily, taking into consideration the state of ventilation at this season of the year. We calculated to have both/under and dressed about 70 tons of ore towards the next sampling.

GAWTON COPPER.—G. Rowe, June 15: During the past four months the sinking of the new engine-shaft has been continued perpendicular 13 feet long and 6 feet wide, principally worked by 12 men, and deepened 8 fms. 1 ft. 6 in., making a total depth of 35 fms. 4 ft. 6 in. below the surface. In the course of sinking the last 15 fms. we have met with some hard floors of spar passing through the shaft, which has impeded our progress. At the present bottom we have cut (I think) the No. 2 south lode, which is underlying south about 2 1/2 feet in a fathom, with a well-defined wall on the north side, and carrying a portion of easy ground for opening on its course. This lode is running parallel with the length of shaft, and is found to be 2 feet wide, composed of capel, spar, mundle, and peach, spotted with ore, showing a kindly appearance. The lode has been stopped about 36 fathoms in the back of the 36 west, from which 212 tons 2 cwt. 2 qrs. of ore has been sold, and we calculate to have about 80 tons more preparing for the next sampling. The 36 west has been driven 4 fms. 4 ft. 4 in. on the south part of the lode; the north part being standing for some 5 fathoms when last taken down was valued from 2 to 3 tons of ore per fathom. During this period of four months a considerable amount of materials and plant has been added to the stock on the mine, and all at a very moderate price, which consist of 25 fms. of 11 and 12-inch pitwork, including 11-inch plunger-lift, 10-inch main-rod, with strapping plates, pump rings, capstan, chain, &c., also a new balance-bob, with suitable connections thereto belonging, all of which we propose to fix and make complete in proper working order as soon as the present contract of sinking 2 fathoms in the shaft is accomplished; after which being done I would advise the shaft to be continued with a full pair of men to a sufficient depth to extend a cross-cut towards the lode at or about the present depth of the old workings, which we calculate to be 46 fathoms perpendicular at this point. During the summer months, or so long as the ventilation continues defective, I think it will be advisable to discontinue the principal part of the operations in the old mine upon the lode, and only continue a sufficient number of hands to have charge of the machinery in that department, and keep the workings in good repair. If this mode of operation is found to be satisfactory the returns will be of little importance (during this period), excepting the next sampling, which will be over 80 tons of copper ore. Our next requirements to complete the necessary plant for the time being is a new shears to be erected over the engine-shaft, which will probably cost about 200. more, when the greater portions of expensive material will be obtained and available on the mine for some considerable time, so that I think we may calculate to reduce the working expenditure of the mine to about 1500. per month.

GLASGOW CARADON.—W. Taylor, June 13: The lode in the 52 east and west has a much better appearance than for some time past, producing some good ore, and likely further to improve. The stopes are looking well, and turning out fair quantities of ore. In the cross-cut south towards the caunter we have very favourable ground, and making good progress in driving. We have sampled (computed) 170 tons of copper ore, for sale on the 30th, which I hope will fetch a tolerably good price.

GOONZON.—T. Trevillion, June 13: We have cut through the lode at the 20; the same is about 3 ft. wide, yielding a little tin, but nothing to value; we have set to drive east and west on its course, and a little while we shall see more of its character. The lode in the 10 west is 2 ft. wide, yielding saving work. There are two stopes working in back of the 10, worth about 70. or 80. per fm. On No. 2 lode we are sinking or stopping the bottom under the add; the lode is large, and yields saving work for the stamps. In the back of the add, on No. 2 lode, the stopes continue to yield good work, worth 80. per fm. We hope against our next sampling to get a nice parcel of tin for market.

GREAT BRIGAN.—J. Treddinick, June 11: The ground in Higbrow shaft, sinking below the 45, is much the same as last week; the lode produces a little ore, but not to value. The lode in the drive west of Higbrow shaft, at the 33, is poor. The ground in the cross-cut driving south at this level is a favourable character for copper ore. We have taken down about 15 tons of ore at present price for driving, 140. per fm. But the drive we have been through two lodes, the first which is from 15 to 16 fms. from shaft, is about 2 ft. wide, bearing nearly east and west, and underlying north, composed of peach, prun, mundle, and quartz, with spots of yellow copper ore; the other is about 30 fms. from shaft, and is parallel with the first, also underlying north. There is a very large, strong, and healthy looking lode, rather over 6 ft. wide, composed of quartz, peach, iron, mundle, &c., intermixed with stones of yellow copper ore, and letting out a quantity of water. It is our intention to still continue the driving of this cross-cut north towards the boundary, as there is not the least doubt, from the relative position of this mine with the Caedon, being direct east, but that other lodes of importance will be encountered in the driving of this cross-cut. In the 60 cross-cut, south of engine-shaft, the ground is moderately favourable for progress, carrying branches composed of quartz, mixed with mundle and spots of lead and copper ore; this level is extended 35 fms. 1 ft. from shaft, by four men—present price for driving 80. per fm. The engine and shaft work are all in excellent working order; since, however, we cut the last lode in the north cross-cut the water has greatly increased.

GREAT LAXEY.—R. Rowe, June 14: We have cut the east lode in the 210 north near to the Welsh shaft, where it is fully as good as we looked for, being 2 feet wide, and worth about 200. per fathom. The best ground on this lode lies altogether ahead, and to the north of this. The 200 end, driving north, is not so good at present. The lode is smaller, and appears to be encountering one of those "nips" so common to all lodes, but which are often followed by a sudden widening and increased richness of the lode. The 180 end is worth about 400. per fathom. In the 165 end the lode has increased in size, now 3 ft. wide, but not yet of much value. The stopes in the roof of this level are still looking well, and worth 2000. per fathom. The 155 end, driving on the east lode, are worth to the north 600. and to the south 800. per fathom. The north end, in the 145, is worth 900. per fathom and the south 400. In the 130 the cross-cut is driven 3 1/2 fathoms, and from appearances we are near the lode. The lode in the 110, driving north, never looked better, being about 4 ft. wide, and worth 2200. per fathom, and the stopes in the roof keep up their value and are worth fully 2000. per fm. The new lode, driving back south at this level, is smaller than last reported, but still good for sack. There is, however, an appearance of a change, and to-day we have cut a feed of water in the end, which is not a bad omen. At Dumbell's the men are engaged in timbering and lining the sump down to the 70, and in a few days will be in a position to open out a new level north and south on a large and productive lode. In stopping the roof of the 45 we have an improvement, the lode being now worth from 400. to 500. per fathom. In resuming the sinking of the Agnew shaft, we are pleased to find much less water than expected. This shaft going down into new ground is likely to turn out an important operation in favour of the future value of the mines, and the prospects, by means of the 110 level leading directly to it, are already sufficiently assuring to satisfy us as to the ultimate result. The South Ground: In the 190 end, driving south, there is yet no change. The 165 has reached the copper ground, and is now producing saving work. The new 155, opening out from the sump south, is worth 600. per fathom for lead and copper. The lode in the 145, driving south, is small and poor, being, I am almost satisfied, driven for some distance on the eastern branch or split, and the main lode yet standing off on the west side. The 130 continues to open out good copper ground, and the stopes in the roof, together with those on the sole of the 120, are producing much as for some time past. The rise in the roof of the 100, towards the corner shaft, has a lode in it 9 feet wide, all saving work for copper. The stopes below the 60, north of the copper ground, have much improved for sack and lead, and are worth 700. per fathom. This is important, as the ground is whole down to the 100. Altogether, I never saw the mines look so well.

GREAT NORTH DOWNS.—J. W. Crase, M. Jenkin, June 11: There is no change in Vivian's engine-shaft for the week; ground still hard; these remarks will also apply to the 57 cross-cut, driving south of this shaft. The lode in the 57, driving west of engine-shaft, is 4 ft. wide, worth 100. per fm. The lode in the 57, driving east of Jenkin's shaft, is 2 ft. wide, yielding saving work, and improving. The lode in Jenkin's shaft, sinking below the 57, is 2 ft. wide, producing stones of copper ore, but not sufficient to value. Pendave's lode, in Rale's shaft, sinking below the 40, has declined in value since our last report; it is now 4 ft. wide, composed of soft quartz, kilaas, and spotted with copper ore; its present appearance we believe the falling off is only temporary. The lode in Slegan's shaft continues to improve in appearance and value as we sink. The lode in River shaft is looking well; the part that is being carried, 4 ft. wide, for length of shaft, 9 ft., is worth 450. per fm., and improving as we sink. The lode in the 57, driving west of River shaft, is unproductive. No change in the 50 fathom level cross-cut north.

GREAT RETALLACK.—Wm. H. Reynolds, June 14: The ground in the add continues favourable for driving, but we have not yet met with another lode. **GREAT SOUTH CHERRY.**—N. George, June 16: We have been ceasing the same in different places, and further opening up the sacks of some of the lodes then discovered; the lodes are well defined and very promising; judging from the appearance of the backs of the lodes, the stratum being so congenial for lead, and their coming into contact with elvans and intersections by cross lodes, there can be but little doubt that at a fair depth they will be found to be productive of lead ore. The add is being driven in two places; we have another shaft sunk on it, from which we hope to communicate this week. Our driving is about 30 fathoms per month, besides sinking the shaft. **GREAT SOUTH TOLGUS.**—J. Daw, June 15: Friday last was our setting-day: In the 166 west the lode is 1 ft. wide, unproductive; driving by three men and three boys, at 40. per fm. In the 154 cross-cut we have cut the south part of the lode; it is 15 in. wide, producing 1 1/2 tons of copper ore, or worth 100. per fm. In the 144 the lode is 2 1/2 ft. wide, worth 120. per fm. for tin; driving by four men, at 40. per fm. In the 140 east the lode is 1 ft. wide, producing stones of copper ore; driving by four men, at 30. per fm. In the 40 west the lode is 1 ft. wide, unproductive; driving by four men, at 40. per fm. In the 125 west the lode is 1 1/2 ft. wide, worth 60. per fm. for copper ore; driving by four men, at 40. per fm. In the winze sinking below the 125, on tin lode, the lode is 3 ft. wide, worth 60. per fm. for tin; sinking by two men, at 60. per fm. In the 112 cross-cut north we have not yet intersected the north lode; driving by six men, at 50. per fm. In the 90 east, on the north lode, the lode is 1 foot wide, producing occasional stones of ore; driving by two men, at 50. per fm. In the stopes in back of the 154, west of winze, the lode is 4 ft. wide, worth 160. per fathom; stopping by four men, at 40. per fm. In the stopes in back of the 154, east of winze, the lode is 5 ft. wide, worth 200. per fm.; stopping by four men, at 30. per fm. In the stopes in back of the 140 the lode is 3 ft. wide, worth 120. per fm. for tin; stopping by four men, at 40. per fm.

GREAT WHEAL BUSY.—J. Edwards, J. Fetherick, W. Trelease, June 11: There is no change to notice in Harvey's engine-shaft during the past week. The lode in the 140, driving east of add shaft, is 2 1/2 ft. wide, producing a little tin and copper ore. The men belonging to the 140 west are now engaged cutting a pit at Fielding's shaft in this level. The lode in this shaft, sinking below the 130, is about 2 ft. wide, producing good stones of copper and tin ore. The lode in Offord's shaft, sinking below the 130, is at present disordered by a cross-course, but no doubt by sinking about 6 or 8 ft. more the lode will resume its usual size and value. The lode in the 130, driving east of add shaft, is 15 inches wide, worth from 80. to 100. per fathom for tin and copper ore. The lode in the 130, driving west of Fielding's shaft, is producing good stones of copper and a little tin. The lode in No. 1 stop, in the back of the 130, east of Offord's shaft, is worth from 80. to 100. per fathom for tin and copper ore. No. 2 stop, east of ditto, is worth 250. per fathom. We have resumed the sinking of Mathew's shaft below the 110 fm. level. The lode in the 110, driving east of add shaft, is unproductive. The lode in the 70, driving east of Mathew's shaft, is worth 120. per fathom. The stopes in the back of this level is worth about 60. per fathom.

GRYLLS WHEAL FLORENCE.—E. Rogers, Edmund Rogers, June 14: The engine-shaft is enlarged 5 fms. 3 ft. below the 30 from surface, and is progressing as fast as possible by eight men. In the cross-cut at the deep add there is no alteration worthy of

notice; the ground is composed of kilaas and spar, with spots of copper ore. At surface the walls of the engine-house are up to the required height, and the masons are now engaged waiting for the brickwork to the stack, and the carpenters are busily employed preparing the woodwork for the roof.

GWYDYR PARK.—Wm. Smyth, June 15: In the gossan end we have cut what I think is the north-east and west lode; it is running about 100° south of west, and about 1 ft. wide, composed of spar, blende, &c., with spots of lead ore. We are still dealing the lode in Gwydyr stopes. The lead ore is at Tredegar Quay, and I have written to Messrs. Jenkins Brothers to that effect.

HALLENBEAGLE.—J. Edwards, E. Richards, June 11: The eastern shaftmen are now engaged cutting pit at the 36, on the south lode. We have not been able to clear the bottom east of add shaft during the past week in consequence of water. We are clearing the old engine-shaft below the 14 as fast as possible. All other operations are progressing satisfactorily.

HAWKMOOR.—J. Richards, June 14: No. 3 lode in the add level, driving west, is about 1 1/2 ft. wide, composed of capel, quartz, and mundle. The lode in the stopes in the back of this level is from 2 to 3 feet wide, composed of capel, peach, mundle, and good work for tin ore.

HINGTON DOWN CONSOLS.—T. Richards, June 15: Bailey's engine-shaft, sinking below the 110, is worth for the length of shaft 600. per fm.; the ground is very favourable for sinking. The 110 west has improved, now worth 400. per fm. There is no alteration in other part of the mines.

KELLY BRAY.—Geo. Rowe, June 15: The lode in the 70, east from engine-shaft, is looking much better in character, and producing very strong mundle, with hard capel, and occasional good stones of yellow copper ore, having just passed through a small cross-course, which I think is likely to influence the lode, from which better results at this point may be expected. The lode in the stopes in bottom of the 25, east from western shaft, has improved, worth 2 tons of ore per fm., or 70.

LADY BEITHA.—Capt. Harper and Metherell, June 13: We have no change to inform you in the appearance of the bottom levels. In the 41 east the lode is looking a shade better, having broken some good stones of ore from the lode during the past day or two. We have just made a communication with the winze below the bottom of west and the rise above the 53. All other points of operation are the same as last week.

LANIVET.—J. Treary, June 11: Vance's Lode: The lode in Outon's shaft is 5 feet wide, producing good stones of tin, and very promising for a further improvement. Purser's Shaft: We are down to water. I have put these men to help to get on with the rod and pitwork in Petrie's engine-shaft; it will be got on with as fast as possible. The bob is up and in its place. Douglas Shaft: We are down to water.

LEAWOOD.—J. Nicholls, June 11: The add is cleared 140 fms., and we hope to have secured the worst part of it in a fortnight from this time. The masons are getting on well; the engine-house is up 20 ft. All other work on the mine is going on satisfactorily. I have a letter from the engineer this post; he states that Messrs. Harvey and Company are on well with the engine.

MAUDLIN.—J. Treary, June 11: Old Mine: The lode in the 70 west end is composed of mundle and stones of copper ore. West Mine: We have fixed the barners, clatern, and lift at the 10, and the engine is working very well; we shall commence sinking the shaft on Monday. Coombe: The ground is favourable for driving.

MERLLYN.—W. Sandoe, June 15: In the 20 north the lode at present is rather poor, producing but a small quantity of lead. The stopes in back of this level are looking better, and producing a large quantity of fair dressing work for the washings-floors; also the end going west on the new lode is looking pretty well; we broke some good lead from this point to-day, and it is likely to open out well. The lode in the winze sinking below the 20, Vivian's shaft, is 1 1/2 foot wide, very regular, producing a little lead, and looks most promising for the future. The sinking of the new surface shaft, which was suspended during the past month or two, is resumed, and we hope to reach the rock in a few days. We have commenced drawing the water out of the winch-shaft, and hope to resume working in the bottom levels in a few days.

MINERA UNION.—W. T. Harris, June 16: Brabner's Shaft: The 80 yard level, driving north on the footwall side of the lode, is producing occasionally stones of lead, and very promising for an improvement. The level driving on the hanging side of the lode has reached the tumbler. I have, therefore, set the men to cross-cut more into the hanging side of the lode; the ground is very favourable for progress, and yielding good work. The stopes in the south end of No. 2 winze is worth 1 ton of lead per fm. The stopes in the north end of the 80 yard level is worth 10 cwt. of lead per fm. Williams's Shaft: The lode in the 40 yard level south is worth 10 cwt. of lead per fm.

MOLLAND.—T. Bennett, June 15: The lode in the 62 east is 2 feet wide, composed principally of quartz, decomposed spar, and iron, with stones of grey ore occasionally. In the rise in the back of this level we have a very strong, hard, masterly lode, 6 feet wide, producing 1 1/2 ton of grey ore per fathom. The stopes in the back of the 42 east are producing 1 1/2 ton of ore per fathom. The stopes in the back of the north part of the lode in the 52 east are producing 1 1/2 ton of ore per fathom; the ore, however, both here and in the 42 east, being thinly dispersed throughout a large lode, is, after much careful dressing, of low quality.

NANGILES.—Jas. Rowe, June 15: The engine-shaft is sinking with good speed by 16 men; it is down 8 fms. 4 ft. below the 96; the lode is standing south of the shaft for 10 ft. high; where we left it it is worth 350. per fm. We shall not take down any more lode in the shaft before we get to the 106. We have good strings of copper in the country, which we consider to be a favourable indication. The 96 is driven as far west as the Bread and Cheese winze. The men are now driving a cross-cut north to intersect the lode; the winze is sunk on below the 86. We expect in driving 3 fms. we shall intersect the lode, and at the same time let down the water which is in the winze. The stopes in bottom of the 96, east of shaft, is worth 300. per fm. The stopes over the 96 are not so good, worth 80. per fm. The tin stopes at the 66 are worth 200. per fm. Our copper and tin tributors are making good wages, at an average tribute of 10s. in 1. We have set the add to drive east on the tin lode, to two men, at 40. per fm.; lode worth 50. per fathom; this level will go under very extensive surface workings, with good prospects of opening up paying tin ground.

NANTEOS.—R. Williams, June 15: We have bored a hole through from the shaft to the rise in the add; we have now 3 ft. more to complete the communication, when I propose sinking below the add level, to prove the lode at greater depth, which will be commenced in a few days. In the add level east I have placed the men to open the ground south beyond the disordered point, to see if the lode be there, which I am induced to think is to the south of us, and which we will soon prove.

NANT-Y-IGAO.—James Roach, June 14: This week we have been able to drive a little in the 20 west. The lode here is improving fast, and producing 12 to 15 cwt. of ore per fm., and about 25 cwt. of blende. The other points of operation are without change. The 30 is still full of water, but I hope to get it drained in a few days.

NEW CORNISH.—(Special Report)—F. C. Harper, June 14: These mines are situated in the parish of Calstock, on the Cornwall side of the River Tamar, a short distance west of the Great Devon Consols Mines. Two engine-shafts have been sunk about 200 fms. apart. The easternmost, or the one nearest the river, is 84 fms. deep. At the 70 a cross-cut has been driven out about 100 ft. from the shaft, and the lode intersected and driven on west for some 100 ft. from the shaft, and the lode is 2 ft. wide, composed of quartz, mundle, capel, and yellow copper ore, and worth, I should say, quite 7 tons of ore of the latter, worth 250. per fm. At the 84, or bottom level, they are now driving a cross-cut from the shaft for the purpose of intersecting the lode at that level, which they expect to do in about two months from this date, a point of no small importance. The pitwork in this shaft is in good working order, 13-in. plunger-lifts, which is being worked by flat-rods from the engine. The western engine-shaft is sunk to the 60, where they have driven on the course of the lode east about 50 fms.; throughout this drive the lode has been poor. In the 40 east, which is several fathoms in advance of the 60, a shoot of ore has been passed rough about 100 fms. long, and about 4 ft. wide, worth on an average 5 tons, or 200. per fm. The lode in this cross-cut is just now poor, and the ground in this level is no change driving, and of a congenial character. A winze has been sunk from this level to the 60 through a very good lode, varying in value in places from 200. to 250. per fm. There is also a rise up above the back of this level (40) to the 20; here the lode in places is worth from 120. to 150. per fm. The lode in the 20 east is small, producing a little black and yellow ore, worth from 1 ton to 1 1/2 ton per fm. From the foregoing remarks you will observe that there is a quantity of ore ground laid open in this part of the mine, and as soon as the 24-in. cylinder-engine, now in course of erection, is completed, which it is expected will be about a month, it is intended to commence stopping, and for the purpose of drawing all the staff and crushing the ore. I would remark, in conclusion, that looking at the strong healthy appearance of the lode in this mine there is a fair chance of ultimate success, particularly in the eastern part.

NEW CROW HILL.—Capt. Trelease, June 14: In the 55 east the lode is not quite so wide, but very wet, producing good stones of lead ore, but without a regular leader for the present, though a strong and kindly lode. We shall commence sinking a winze in bottom of this level some time this week, if the water will permit. In No. 2 stopes, in back of the 55, the lode is worth 3 cwt. per fm. In No. 3 stopes, in back of the 55, the lode is worth 15 cwt. per fm. In No. 4 stopes, in back of the 55 fathom level, the lode is worth 15 cwt. per fm. We have set 170 tons of lead to cut for the water-wheel to be erected at Louisa shaft, at 24. 6d. per fm. We are shipping 80 tons of mundle for Swansea, and the 30 tons of blende as soon as we can get a vessel.

NEW TRELEIGH.—Samuel Mitchell, June 16: The lode in the 80, west of Good Fortune shaft, is looking a shade better than for some time past. The 70, west of Symon's shaft, is not yielding so much ore as it did last week. The winze sinking below the 50 is worth 70. per fm.—Carr's Engine-shaft: The 90 west is very much improved for ore, and the 80, west of this shaft, is looking better. The 70, west of the cross-course, is producing a good deal more ore. This is a very important feature, having whole ground opened for so long a time. The engine is being cleared up and secured at a shaft 4 fms. deep, which is the bottom of the old men's add or lobby; but finding this level not thoroughly drained to the bottom, consequently we were necessitated to go back to the tail of the lobby, and clear it, which will be completed in the course of two or three days. At the bottom of the shaft before-mentioned is a level driven on the course of the lode nearly 40 fms. in length and nearly two-thirds of the distance the lode is taken away in the back for copper ore, apparently. This work was done without the aid of machinery, and for this reason we may calculate but little has been done below the level, as I should consider the water too much to be kept by manual labour. Portions of the lode that we find standing in the old workings are composed of gossan, quartz, and copper, a very likely lode for the yield of copper ore when wrought on at a deeper point.

NEW EAST RUSSELL.—J. Gifford, June 14: In the deep add west the south part of the lode which we are carrying is 2 1/2 ft. wide, with a branch on the south wall yielding 1 1/2 ton of copper ore per fathom; driving at 50. per fm. **NEW PEMBROKE.**—F. Puckey, John Puckey, June 13: The engine-shaft is sunk 5 1/2 fms. below the 45; the ground in the shaft is still good for sinking. In the 45, east of shaft, on the north lode, the lode is 1 1/2 ft. wide, but at present disordered in consequence of a branch crossing it; the water is issuing freely from the lode, and the lode looking kindly for improvement. In the same level west the lode has made a splice, but is again opening, and is now 3 ft. wide, composed of quartz, peach, and a very kindly lode, but at present unproductive. In the 45 cross-cut south there is no change to notice, being in a good mineralised stratum of ground, and easy for exploring. We expect to communicate the new shaft with the 30 this month, which will then give good ventilation for working the mine.

NEW ROSEWARNE.—E. George, W. Mitchell, June 15: The 74 is driven west of Phillip's shaft 40 fms.; lode 1 ft. wide, producing a little tin, and occasional stones of copper ore. The 74 is driven east of Bickford's shaft 7 fms.; lode 2 ft. wide, producing a little tin and copper, but not to value; the same level west is driven 3 1/2 fms. from shaft; lode 6 ft. wide, worth 80. per fathom. The 67 is driven west of Bickford's shaft 23 fathoms; lode 2 ft. wide, worth 80. per fm. The 67 is driven east of Bickford's shaft 22 fms.; lode 1 ft. wide, and unproductive. The stopes in back of the 67, west of Bickford's shaft, is worth 100. per fm. The stopes in bottom of the same level east is worth 100. per fathom. We have holed the winze sinking under the 46, west of Bickford's shaft, and shall resume the driving of the 46 and 58 fm. level ends at once.

NEW WHEAL MARTHA.—H. Rickard, G. Rickard, June 9: The engine-shaft is now down 12 fms. 1 ft. below the 74, by the side of the lode; the kilaas is of the most favourable description for the production of mineral. We intend sinking to the required depth of 15 fms. for trip-pick, &c., which we hope to accomplish in about six weeks from this time. The lode in the 74 is being the whole width of the end, and more lode standing to the north, which is not taken down, producing arsenic, mundle, with small portions of soft, friable spar, and a little copper ore—a very promising ground. In the same level east the lode is composed principally of fluor-spar and mundle, with stones of copper ore, but not to value. The stopes in bottom of the 52, both east and west from

No. 1 winze, is worth on an average 300. per fm. for copper ore. We have resumed driving the 30 west from Thomas's shaft, the last being an average 250. per fm. In the cross-course, there being a good ore lode about 8 fms. in advance of this end, gone down in bottom of the 10, for 12 fms. in length, worth on an average 250. per fm.; therefore, we anticipate good results as the end gets off from the influence of the cross-course. The tribule department remains without any material alteration. On the whole, we consider the prospects of the mine to be very encouraging for future development.

NEW WHEAL ROSE.—J. Middleton, J. Hamillie, June 16: During the past week we have cut through the lead-bearing ground, and believe it to be droppers into the north and south lode. We have now commenced driving on the branch to the west, from which we have broken good stones of lead. The more we see of the channel of ground in driving through it, the greater is our opinion that when we get deeper we shall have a very productive lode. Within the past week we have forked out the winze in the bottom of the add level, south of hauling shaft, and we find the lode to improve as we go down.

NORTH BASSET.—Geo. Davey, June 15: Main Lode: In Grace's shaft the lode is 3 1/2 ft. wide, composed of spar, prun, gossan, and tin, worth 60. per fathom. In the 112, east of Grace's shaft, the lode is 1 ft. wide, chiefly composed of gossan, and containing a little tin. In the 112 east the south part of the lode is 1 ft. wide, producing stones of copper and tin ore, but not enough to value. In the 112, west of Grace's shaft, the lode is 2 ft. wide, worth 30. per fathom for tin. In the winze under the 102 the lode is 2 ft. wide, worth 30. per fathom for tin. In the 92 west the lode is worth 70. per fathom for tin.—South Lode: In the 102 west the lode is 4 feet wide, composed of 3 1/2 ft. wide, worth 50. per fathom for tin. In the winze under the 102 the lode is 3 1/2 ft. wide, worth 50. per fathom for tin.

NORTH BULLER.—R. Pryor, H. Harvey, June 11: The lode in the 100, east of engine-shaft, is 4 ft. wide, producing good stones of ore. The ground in the 100 cross-cut, south of shaft, continues to be much the same, and still letting out a quantity of water, which is strongly mineralised. The lode in the winze sinking below the 78 is 2 ft. wide, composed of mundle, peach, and spar, with good stones of copper ore, of a most promising character. The lode in the 90, west of cross-course, on King's north lode, is 18 in. wide, composed of mundle, peach, prun, and spar, with a little ore intermixed, and letting out a little more water than usual, which we consider a favourable indication.

NORTH CHIVERTON.—J. Hampton, June 15: There is no alteration to notice at the new engine-shaft since last week; the ground is exceedingly good and promising, and mineralised to a very high degree. Since writing you last I have discovered that Shepherd's lode is standing entirely in whole ground, to the south of all the former workings. The shallow add went through this lode, and there is lead in it at that place, and the southernmost shaft cut it, I find, about 7 fms. below surface, but no notice was taken of it, being so near the surface. I will only say now that in a few days after the engine goes to work we shall be able to commence a cross-cut, and intersect this lode 30 fms. deep in three weeks afterwards; and as the next parallel lode to it, a few fathoms off to the east, there is every chance of making a very important discovery. The main piece of rock was attached to the engine to-day. Both balance-bobs are fixed, and the various connections will be rapidly made.

NORTH CROFTY.—J. Vivian, June 11: Tin Department: In the 183 east the lode is principally flookan. In the 183 west the lode is 5 ft. wide, tinny throughout. Fetherick's shaft is now down 5 fms. under the 170, and we hope to communicate with the 183 in about two months. In the 170 east we have commenced to rise against the winze under the 160; the lode in each place is worth 300. per fm. In the 170 west the lode is principally flookan. In the 160 east the lode is worth 350. per fm. The stopes above ditto are worth 250. per fm. In the 150 east the lode is small. The stopes above the 150 are each worth 150. per fm. In the 130 and 120 east the lode in each is regular, and occasionally producing stones of tin and copper ore. We sold yesterday 10 tons of tin, at 640. 10s. per ton.—Copper Department: The 60, west of Fetherick's shaft, will turn out 4 tons of copper ore, or 300. per fathom. The stopes above will produce 3 tons, or 220. per fathom.

NORTH DEVON.—J. Blamey, June 14: Caunter Lode: Since the discovery of this lode in the 10 fm. level, as reported last Friday, we have driven upon it a few feet, and as far as seen it is 2 ft. wide, nearly solid ore.

—June 16: The caunter lode has been opened on about 5 ft.; the ore in bottom of the level is full 2 ft. wide, and it appears to rise in the level as we drive on it. In the add level, the lode is 2 ft. wide, and it is likely to be a branch of lead and spar 4 in. wide. The stopes in back of the 20 lode are better than last week, and are still producing about 2 tons per fm., the same as for many weeks past. The winze below the 20 is still a good lode, though not quite so good as last reported. The 30 is without alteration.

NORTH DOWNS.—Francis Pryor, John Grenfell, June 9: The cross-cut in the 85, at King's shaft, is progressing satisfactorily, but we have not yet cut the lode; the ground is, however, getting wetter, and the character of it is very congenial for mineral. In the 60, west of this shaft, on the south part of the lode, we have lately met with some cross-branches, which have disordered the lode, but it is again forming itself regular, and producing saving work. The 60 is extended 2 fathoms east of cross-cut, on the new lode, and the lode taken down, which is a good notice in any other case. The ground is promising appearance. There is no change to notice in the 50, which is beyond our last report. Our ore sold on May 26 weighed 126 tons 1 cwt. 2 qrs., realising 670. 17s. 8d.

NORTH LAXEY.—John Horsley, June 14: The water in the shaft is going down a little every day. The last four days we have had a little rain, and the wheel is going a little quicker. We have about 3 fms. 3 ft. of water in the shaft yet. I expect we shall be able to get into the 60 end after this week, at the rate the wheel is going at present. We are going on with the surface work as quick as possible.

NORTH MINERA.—J. Dunkin, June 15: On Saturday last, being our setting-day, the following baranals were re-set:—A cross-cut north from the eastern shaft, in the 40 to nine men, at 120. per fm.; after driving this cross-cut about 9 feet, I propose to divide and case the shaft down from the 25 to the 40, so as to bring down the winze-kibble, by which means we shall be able to drive this level much cheaper, as we have now to draw the stuff 15 fms. by manual labour. A winze to sink under the 15, west of eastern shaft, to six men, at 90. 10s. per fm.; the lode in the winze is a little disordered at present, and producing some good stones of lead ore.

NORTH POOL.—J. S. Phillips, J. Pope, June 13: The engine-shaft is being sunk by nine men and horse-power for water and stuff, with great facility, and is now 2 1/2 fms. under the add level of 23 fms. This level is being extended west on No. 1 north lode, which is large and promising, and south-east towards that of the old mine and south lode. In the present end we have a large spar course crossing the level, which we are not yet sufficiently thorough to ascertain its merits, or if a lode is beyond. The engineers are elevating the main beam to position, and fixing the two bolers within the distance, that the masons may build the house. The masons are completing a beam stand, stonework for stack and clatern walls. The main pumping-rods are fixed at the Ballarat shaft, complete from balance-beam to plunger pole, 34 fms. from surface. Carpenters, pitmen, smiths, and assistants are busily engaged about the various mechanical requirements for engine, and the attachments for pumping from the engine and Ballarat shafts. Surfactmen are cutting roadway for horizontal rods, attending on engineers, and weighing the heavy weights now required by our artists.

NORTH ROSEWARNE.—J. S. Phillips, John Jones, June 13: The deep add level is being driven at the month's prices, with rapid progress. That on No. 3 lode is entering a horse of mixed kilaas, which divided the lode

ing the shore. The rock is white, shining like snow, and the water is dark brown. The present we are sinking by the south side of the lake. There is no change of water having communicated to the rise from the 60. There is no change of water to notice in the stopping department since last report. The late rain has raised the surface water so as to enable us to draw eight stamps, and our works are most satisfactorily.

L. SPARNON.—W. Tregay, E. Chegwin, June 11: In cutting down the en-

Large quantities of ore were being raised from the several shafts, when the water put a stop to the works, and from one mine alone, the month previous to the stoppage, upwards of 500 tons of ore were sold, and large quantities were ready to be brought up, which can be raised immediately the water is removed, and will at once realise a large profit. The purchase-money is fixed at 18,000*l.*, of which one-fifth is to be paid in cash, and the remainder in shares of the company. The property has been favourably reported upon by Mr. Thomas L. Cottingham, of Mold, and by Mr. John Hinchins, who is "fully impressed with the conviction that, with spirited and economical energetic management, these mines consolidated offer a field of no ordinary character for successful mining enterprise." The prospectus will be found in another column.

The Sardinian Company, with a capital of 100,000*l.*, in shares of 25*l.* each, has issued its prospectus, the object of the enterprise being "to develop the resources of the rich and fertile island of Sardinia." It is mentioned that, owing to the increasing want of timber and fuel on the mainland of Italy, these rich woodlands of Sardinia have been, and will long continue, by means of the facilities of transport afforded by the railway, to be a most valuable source of wealth to the island.

The progress during the past week of other undertakings recently introduced, the publication of whose prospectuses has been already announced, is thus reported.—The Hydraulic Tube Drawing and Steel Ordnance Company have given notice that the share list will be closed on Saturday next for London, and on the Monday following for the country.—Great North York have also been well applied for, and close their list at the same time. The shares are quoted 1 to 1½ prem. There is very little doing in new companies generally.

At the Swansea Ticketing, on Tuesday, 2344 tons of copper ore were sold, realising 23,048*l.* 11*s.* 6*d.* The particulars of the sale were—Average standard, 103*l.* 5*s.*; average produce, 12½; average price per ton, 9*l.* 17*s.*; quantity of fine copper, 284 tons 4 cwt. The following are the particulars of the sales during the past month:—

Date.	Tons.	Standard.	Produce.	Price per ton.	Ore cop.
May 24.....	1097	103 5 0	12 1/2	9 17 6	83 2 0
June 14.....	2344	103 5 0	12 1/2	9 17 6	83 2 0

Compared with the last sale, the decline has been in the standard 2*l.*, and in the price per ton of ore about 5*s.* Of the 2344 tons sold on Tuesday, 1383 tons were British ores, which gave an average produce of 9½, and sold at an average standard of 104*l.* 2*s.* 6*d.*—7*l.* 12*s.* per ton of ore; the remaining 961 tons were foreign ores, which gave an average produce of 15½, and sold at an average standard of 102*l.* 8*s.* 6*d.*—13*l.* 1*s.* per ton of ore. On June 28 there will be offered for sale 2370 tons, from Berchaven, Knockmahon, Cape Ore, Gwalla, Holyford, Connorree, Wallaroo, and elsewhere.

At Dolcoath Mine meeting, on Monday, the accounts for the two months showed a profit of 2555*l.* A dividend of 2506*l.* (7*l.* per share) was declared. About the same quantity of tin (173 tons) has been sold in the previous two months, but the profit is less by nearly 600*l.*, and the dividend diminished by 358*l.*, mainly owing to the fall in tin. The bottom levels are still poor, but the value of the ends is 232*l.* per fathom, and the heights of the tin ground about 56 fms. east, and 50 fms. west. If these levels are extended about 3½ fms. in the two months, the decrease of the tin ground in stock is only 1000*l.* In two months, or 6000*l.* per year; at this rate the reserves of tin ground will last a considerable time before this old mine is exhausted.

At Wheal Seton meeting, on Monday, the accounts for March and April showed a credit balance of 2250*l.* 8*s.* 10*d.* The profit on the two months' working was 2250*l.* 8*s.* 10*d.* A dividend of 1884*l.* (4*l.* per share) was declared, and 6667*l.* 8*s.* 10*d.* carried to credit of next account. Capt. Robert Williams and W. Rowe reported upon the various points of operation.

At the Carn Brea Mine meeting, on June 2, the committee's report stated that the accounts for the year showed a balance of profit of 5398*l.* 12*s.* 5*d.*, an amount small as compared with former years, but an improvement on the last two years. The committee declared a dividend of 2*l.* per share. The future prospects of the mine depend, to a great extent, upon the price of tin. The average price of Carn Brea tin for 1863 was 65*l.* 18*s.* 4*d.*, and the price of that sold last month was 61*l.* 15*s.* The minimum value of the plant, valued as if to be broken up, is 40,000*l.*

At Great Wheal Vor United Mines meeting, on Wednesday (Mr. G. Nokes in the chair), the accounts made up to the present time showed a credit balance of 6403*l.* A dividend of 12*s.* per share was declared, leaving a balance of 2859*l.* to be carried forward to the credit of the next account. Details in another column.

At the Wheal Mary Ann meeting, on Tuesday, the accounts for the three months ending March showed a credit balance of 2019*l.* 3*s.* 9*d.* A dividend of 12*l.* (10*s.* per share) was declared. The profit on the workings was 828*l.* 2*s.* The agents' report is among the Mining Correspondence.

At Great Wheal Fortune meeting, on June 7, the accounts for three months, ending February, showed a credit balance of 1015*l.* 10*s.* 8*d.* The profit on the workings had been 186*l.* 12*s.* 4*d.* The applications from Mr. W. Gundry, of London, desiring to treat for a portion of this sett, to be added to West Wheal Vor, were not entertained. There are 40 places being worked by 116 men, at an average tribute of 12*l.* in 1*l.* tributors being paid 60*l.* per ton for tin; number of men employed on the works, 84; kiln sizers and lancers, 14; at surface, including smiths, carpenters, engineers, &c., 52; on the dressing-floors, men, boys, and girls, 260; total, 526. Mr. Robinson, the purser, writes that "the prospects of the mine are considered to be improved, and there are several points of operation which in all probability will, in a few months time, considerably advance the value of the property."

At the East Wheal Vor meeting, yesterday (Mr. Schofield in the chair), the accounts showed a credit balance of 5400*l.* Details in another column.

At West Great Work Mine meeting, on Tuesday, the accounts for the three months ending April showed a debit balance of 1707*l.* 17*s.* A call of 7*s.* 6*d.* per share was made. A resolution was passed, forfeiting 351 shares for non-payment of call; of these, Mr. W. Vivian took 29 shares at the price of the calls, and the remaining 322 shares were extinguished. There will henceforward be 3500 shares; and it is upon this number that the present call is made. Application is to be made for an abatement of the dues. Capt. S. J. Reed reported favourably upon the mine. The purser thus explains the increased cost:—"The charging up the cost of the very excellent engine, manufactured by Messrs. Harvey and Co., of Hayle, and the necessary surface labour, including the erection of the engine and boiler-houses, and other suitable buildings, in addition to our underground operations for the three months, has consequently made a considerable increase to our expenditure. By reason of this outlay, however, we are now placed in a position to develop this mine effectually to a considerable depth."

At the Gawton Copper Mine meeting, yesterday, the accounts showed a debit balance of 89*l.* 8*s.* 6*d.* A call of 1*s.* 6*d.* per share was made, and the committee of management re-elected.

At the Grambler and St. Aubyn Mine special meeting, on June 8 (Mr. C. J. Lanyon in the chair), Mr. F. W. Dabb was appointed the purser, at a salary of three guineas; and Capt. John Michell was appointed manager, at his former salary of 9 guineas per month. Messrs. W. Michell, R. Michell, J. Hocking, W. McKeand, and W. Sannarow, were appointed the committee for the ensuing twelve months, to confer with the manager and purser. Messrs. Williams and Co., the bankers, were requested to honour all cheques drawn on them for and on account of these mines, when signed by two members of the committee, and countersigned by the purser, and that at no time the banking account be overdrawn 500*l.*

At the Great Caradon Mine meeting, yesterday, the accounts showed a credit balance of 267*l.* 14*s.* 6*d.* A call of 2*s.* per share was made, and the committee of management re-elected.

At the Wheal Esther United Tin Mines meeting, on June 7 (Mr. Drew in the chair), the accounts, including May cost, showed a balance of liabilities over assets of 474*l.* 6*s.* A call of 1*s.* 6*d.* per share was made. The committee were authorised to put up, as they deemed most beneficial to the company, the additional stamps which they recommended. The retiring committee were re-elected, with the addition of Mr. Cardell. The report of the agent (Captain T. Howse) stated that he had no doubt this month would pay cost, and perhaps leave a profit.

At East Wheal Russell meeting, yesterday (Mr. Procter in the chair), a call of 6*s.* per share was made. Details in another column.

At New Wheal Martha meeting, on Tuesday (Mr. Linford in the chair), it was unanimously resolved to increase the capital of the company from 10,000*l.* to 15,000*l.* by the creation of 5000 new shares of 1*l.* each. Details in another column.

At the Prince of Wales Mine meeting, on Thursday, the accounts showed a cash balance of 43*l.* 17*s.* 3*d.* in excess of liabilities—127*l.* 14*s.* 9*d.* A call of 6*d.* per share was made.

At the Bryn Gwiof Mine meeting, on Thursday (Mr. R. Hallett in the chair), the accounts showed a debit balance of 268*l.* 2*s.* A call of 1*l.* per share was made. A resolution was passed forfeiting the shares in arrears of call. The report of the agents stated that for the next quarter the average returns, they thought, would be about 25 tons per month. The number of hands employed was about 170.

At the Wheal Ury meeting, on Thursday (Mr. Hinds in the chair), the accounts showed a debit balance of 188*l.* 16*s.* 2*d.* The report of the agents stated that the returns of tin had fallen off during the past quarter, in consequence of the changing of the pitwork, which had delayed the operations for six weeks out of the quarter. The prospects were looking well in the tin lode, and improvements were expected in the copper lode on the north part. The costs had been more than ordinary, by replacing so much new pitwork, building engine-house, &c.—Mr. Halse enquired if all the extra costs had been charged in the present account?—The Secretary (Mr. Dunsford) replied in the affirmative, and stated that 500*l.* had been charged for the engine, and 290*l.* on account of building engine-house, in addition to which there had been a considerable expenditure on account of the new pitwork, &c. In reply to a question, he further stated it was computed that 70 tons of tin would be returned during the next quarter.—Mr. Halse mentioned that he recently had the mine inspected by Capt. Henry James, who concluded his report by stating that when Wheal Ury was more developed, it would be one of the greatest tin mines in Cornwall. He (Mr. Halse) regarded as important the intersection of the south lode, so recently discovered in East Carn Brea.

At the St. John del Rey Mining Company meeting, to be held on Friday next, the directors' report will show that the monthly produce of gold at Morro Velho, in the year ending March 22, was 476,005 dits, against 529,193 dits. In the previous year. The net profit on working the mines was 63,255*l.* 11*s.* 4*d.* Of the 27,765*l.* 13*s.* 7*d.* available (adding interest earned) after payment of December dividend, the directors propose to pay another of 27,000*l.* (2*l.* 10*s.* per share), leaving 265*l.* 13*s.* 7*d.* to carry forward on profit and loss account. The loss of gold in treatment has been reduced to 23-94 per cent., and compared with 27-47 per cent. in the previous year. There has been neither sensible increase nor decrease in the mine force during the year.

NEWCASTLE-ON-TYNE, JUNE 16.—The Mining Market during the past settlement has been quiet; local shares are nominal. Harwolds are sellers at 17*s.* 6*d.* and close at 10*s.* to 20*s.* See North Heath, &c. to 10*s.* East Lovells in fair request; considering the great value in the different points in operation, this mine should make

good increase in profits during the present quarter. North Crofty, 4½ to 5; the public seem to overlook this mine entirely; its merits are unquestionable, and it is decidedly one of the cheapest shares in the market, at present quotations. Immediate purchases should be made, to realise a large percentage in a short time; the mine is looking well. West Chiverton are cheap at present prices; a great rise will, doubtless, follow the cutting of the 9*s.*; but shares should be picked up whilst they may be had low, and held for the event. Chiverton are also worth attention, at 11 to 11½. Wentworth Consols, 16 to 17, with about 8000*l.* in hand: this mine in a little time is expected to turn out another West Chiverton, so great are the indications for lead at the shallow depth of 16 fms. from surface.—EDWARD BREWIS.

MANCHESTER, JUNE 16.—Prices for mine shares dealt in here have scarcely varied since last week. Hallenbeagle shares continue to command fair attention at the current quotations. Chiverton, 11¼ to 11½; Treilawny, 20¼ to 20½. Great Laxey enquired for at 14 to 14½. East Caradon, 29½ to 30.

CONTRACT FOR COAL.—The Admiralty require the supply of 1000 tons of South Wales Coal, for the steam-vessels at St. Paul de Loando.

ENGLISH COAL IN AMERICA.—A cargo of 1000 tons of South Levenson gas coal, from Sunderland, was sold by auction, at New York, on May 24, at \$13-50 per ton.

RAILWAY COAL TRAFFIC TO LONDON.—A very careful and elaborate analysis of the distribution of the mineral traffic of the Great Northern Railway into London has been made by Mr. Plimsoll, for the information of Lord Stanley's Committee on Metropolitan Railways. A certain period was taken during which the destination of every load of coal leaving the depot was taken down, the exact distance was subsequently ascertained, and then the weight of the coal tabulated accordingly. The results, which are deeply interesting, and have thrown most unexpectedly a flood of light on the subject of railway coal supply, are shown upon maps engraved by Messrs. Parkin and Bacon, of Sheffield. Upon these maps concentric lines in red are drawn round King's Cross. They are at various radii, as ¼ mile, 1 mile, 1½ mile, 2 miles, &c.; and upon the concave surface of each the quantity per cent. delivered between itself and King's Cross, inclusive, is engraved. Thus we find within ¼ mile 35 per cent.; within one mile, 55 per cent.; 1½ mile, 70 per cent.; and within 2 miles, no less than 87 per cent., or nearly the whole. These radii of two miles does not include nearly the half of London, as it only touches the river, does not cross it at any point, and the whole of the east part of London is also outside it; there are, therefore, two more London's, so to speak, available to the Yorkshire collieries, so far, at least, as King's-cross can now be considered London. As a witness before the Committee mentioned, Mr. Plimsoll accounted for the coal traffic being so local in this way:—"The usual load for a horse from a railway station was 2 tons—being in sacks it was neither more nor less. With springs under the van, and a level road, a horse could do this if he could go steadily away with it, but he could not take it up Pentonville hill, to get to the east of London, nor up the approach to Blackfriars-bridge (1 in 25) to reach the south. Equally impossible was it to go *via* London-bridge, as the frequent stoppings and going on again with such a load would shake a horse to pieces; practically, therefore, two miles became the distance within which business was done in the trade. It was, therefore, very desirable to connect the Metropolitan, the North London, and the Great Eastern Railways with the North Kent, the Greenwich, the London and Brighton, and other railways on the south of London, by the proposed East London Railway through the Thames Tunnel, not merely for the advantage of the south-east of London, but also for that of the towns on those railways. Witness did not consider that the gradients of the approaches to the tunnel (1 in 50) too heavy to allow this; it would, of course, be better if an easier gradient could be had, as 1 in 200 absorbed half the motive-power. The remedy was not lighter loads, but more powerful engines. As heavy and heavier gradients than this were in regular operation in Wales; and on the South Yorkshire railway, for example, and on the main line from Leeds northwards. At Holbeck Lane to Wortley junction there was a gradient of 1 in 35, which was continuous for 1½ mile. The Midland Railway, too, brought a large traffic to London over the Great Northern Railway, from Hitchin; and the gradient from Copenhagen tunnel, on the Great Northern Railway, to the Midland depot, at St. Pancras, was no less than 1 in 28; no engineering difficulty need, therefore, be apprehended. Witness thought that the necessity for more and better depots for the accommodation in London of railway coal traffic, hitherto great, was now becoming imperative, owing to the large displacement of seaborne coal traffic which would shortly ensue from the embankment of both sides of the Thames, now in progress. The coal of South Yorkshire was equal in all respects to that of any other district; and, for melting, steam, and manufacturing purposes, superior. Witness had found no difficulty in supplying it to the Government when the specifications restricted the proportion of sulphur present in it to .075 per cent.

SILVER MINING IN NORWAY.—The property now in the hands of the liquidators of the East Kongsberg Native Silver Mining Company of Norway is proposed to be purchased by a new company, with a capital of 150,000*l.*, the projectors believing most confidently that successful results must attend a more vigorous and scientific development of the property than that adopted by the company now in course of liquidation. It is admitted on all hands that a considerable amount of labour, time, and capital, have been profitlessly expended, and that much inconvenience arose from the encumbered position of the capital of the former company, but the new organisation will enjoy a perfect immunity from the latter most serious objection; and, profiting by the experience of the past, it is to be hoped that the executive will direct their attention more to the economic control of the company's affairs than to the expenditure of capital in the adjustment of differences which, if the old company had at its outset been properly organised, would never have arisen. It is affirmed by competent English and Norwegian authorities, that by a systematic development, remunerative results can be easily realised; and reference is made to the extraordinarily productive character of the King's Mines, which are stated to be in precisely the same character of ground as those of the late East Kongsberg Company. It may be remembered that the property was granted by the Norwegian Government to Mr. Lundt. The projectors of the new enterprise propose to offer for the property, plant, &c., 45,296 shares, of which 6300 (fully paid-up) are to be given to the concessionaire, and the remainder (with 1*l.* paid) are to be offered to the other shareholders in the old company.

GREAT NORTH VOR.—The shares in this company have been largely applied for, and are now quoted at 1 to 1½ premium. The property has been favourably reported upon by practical men, and the purchase-money, 2500*l.* in cash and 3000*l.* in shares, is considered to be small. The Great Vor sett adjoins the old Goldolphin Mine, and is within two miles of a railway; it is immediately surrounded by many celebrated mines, which have given immense profits, as will be seen below. The tin and copper lodes contained in this sett are of the same highly mineralised character as the contiguous lodes, which have been so profitable, and they are all embedded in the conglutinated kallas which forms the basin contained between the Crown and Goldolphin granite ranges. In the opinion of practical miners the celebrated Wheal Vor flookan bisects this sett, heaving the lodes similarly to the Great Wheal Vor lodes, which are, in fact, parallel. The property will be held under a lease of 21 years, at the low royalty of about 1-18th, and is located in the midst of the Breage and Crown Mines, which in the aggregate have made returns of about 2,000,000*l.* The mines in this district have sold the richest ores of copper and tin in Cornwall.

GEOLOGICAL SOCIETY OF LONDON.—June 8: Mr. W. J. Hamilton, President, in the chair. Messrs. Christopher Oakley, Waterloo-place, Pall Mall; George Edward Roberts, Geological Society, Somerset House, and Caversham-road Villas; and the Rev. Henry W. Watson, M.A., Harrow, were elected Fellows. The following communications were read:—

1.—"On the Retic Bed and White Lias of Western and Central Somerset, and on the Discovery of a new Fossil Mammal in the Grey Marlstones beneath the Bone-bed," by W. Boyd Dawkins, B.A., F.G.S.

2.—"On the Geological Structure of the Malvern Hills and adjacent District," by Harvey B. Hall, M.D., F.G.S.

Specimens of the new mineral (Langite), a basic sulphate of copper, were exhibited by Prof. Maskelyne, F.G.S.

The next evening meeting of the society will be held on June 22. On Wednesday, the following papers will be read:—1. "On the Fossiliferous Rocks of Forfarshire and their contents," by James Powrie, F.G.S.—2. "On the Reptiliferous Rocks and Footprint-bearing Strata of the North-east of Scotland," by Prof. R. Harkness, F.R.S., F.G.S.—3. "On some Bone and Cave Deposits of the Reindeer Period in the South of France," by John Evans, F.R.S., F.G.S.—4. "On the Silurian Rocks and Granite of the Donetz," by Prof. J. Heilmann, communicated by Sir R. L. Murchison.—5. On a supposed Deposit of Boulder Clay in North Devon," by G. Maw, F.L.S., F.G.S., F.S.A.—6. "On the former Existence of Glaciers in the High Grounds of the South of Scotland," by J. Young.—7. "On the Formation and Preservation of Lakes by Ice-action," by T. Belt, communicated by Prof. A. C. Ramsay, M.A., F.R.S., F.G.S.—8. "On the Geology of Hobart, Tasmania," by S. H. Winkie, communicated by Sir R. L. Murchison, K.C.B.

THE LONDON ASSOCIATION OF FOREMEN ENGINEERS.—The ordinary monthly meeting of members of this society took place at Dr. Johnson's Rooms, Essex-street, Strand. Accidental detention on a railway prevented Mr. J. Newton arriving in time, and Mr. J. M. Oubridge, therefore, occupied the chair on the occasion. Mr. D. Walker, of Messrs. Maudslays, Sons, and Field's establishment, read a very interesting paper on the Screw Propeller. The paper was well received by a crowded meeting, and

some mahogany models of screws, made expressly for its illustration by the Hon. Mr. Duncan and Mr. Western, pupils of Messrs. Maudslays and Co., answered well that purpose, and were much praised by those who closely examined them. A discussion, shared in by Messrs. Ives, Briggs, and Ross, followed, but in consequence of the interest of the subject and the lateness of the hour, this was finally adjourned to the next monthly meeting. Mr. Walker then received the well-deserved tribute of a vote of thanks, and the meeting dispersed.

THAMES MARINE OFFICERS TRAINING SHIP.—The distribution of prizes to the cadets on board the Worcester will take place on board the ship, off Erith, on June 23, when Mr. Milner Gibson, M.P., will present the prizes, and Mr. Henry Green will take the chair. Many of our leading London shipowners will also give employment to the boys leaving the ship, and to all who have been two years on board. A large company is expected to be present; and a special steambot has been provided for the conveyance of visitors, to leave Blackwall at 12 o'clock on that day.

CORNISH PUMPING ENGINES.—The number of pumping engines reported for April is 34. They have consumed 2190 tons of coal, and lifted 17-2 million tons of water 10 fms. high. The average duty of the whole is, therefore, 52,900,000 lbs. lifted 1 ft. high, by the consumption of 112 lbs. of coal. The following engines have exceeded the average duty:—

Engines	Millions	Duty
Boscawen—70 in.	57-3	57-3
Chiverton—Cookney's 60 in.	58-1	58-1
Cargill Mines—Michell's 73 in.	58-1	58-1
Crane—70 in.	58-3	58-3
Dolcoath—Harriett's 60 in.	58-3	58-3
Great Wheal Busy—Harvey's 85 in.	62-0	62-0
Great Work—Leeds' 60 in.	66-5	66-5
New Rosewarne—Phillips's 60-9	60-9	60-9
North Wheal Crofty—Trevenon's 80 in.	53-5	53-5
South Wheal Frances—Marriott's 75 in.	71-2	71-2
West Caradon—Elliott's 50 in.	67-2	67-2
West Wheal Seton—Harvey's 85 in.	67-2	67-2
Wheal Ladcott—Willcock's 50 in.	60-1	60-1
Wheal Margery—Wesley's 45 in.	59-6	59-6
Wheal Seton—Tilly's 70 in.	58-4	58-4
Wheal Tremayne—Michell's 60 in.	60-2	60-2

THE TIN TRADE.—The directors of the Billiton Company have given notice that henceforth they will sell all their tin by public sale in Batavia, in lots of 25 piculs, upon usual conditions, and without reserve. There will be six public sales annually, but no sale will be held within a month of a preceding sale. There will be at least a fortnight's notice of each sale given; in these the quantity of tin to be sold will be stated, and the tin will be delivered immediately after payment.

MINE ACCIDENT.—In Dolcoath Mine Edward Richards and John Climas were injured by the premature explosion of a hole whilst tamping.

LEAD ORES.				
Mines.	Tons.	Price per ton.	Amount.	Purchasers.
Fronchoch.....	70	£14 4 0	988 0	Stims, Williams, & Co.
ditto.....	70	14 2 0	984 0	Walker, Parker, & Co.
East Darren.....	80	17 9 6	1435 2	Stock & Co.
Goginan.....	18	18 2 6	328 7	Panther Co.
ditto.....	7	19 5 6	136 9	ditto
ditto.....	11	13 0 0	143 0	ditto
Cwm Erfin.....	35	18 8 6	650 1	ditto
ditto.....	30	17 9 0	537 0	Walker, Parker, & Co.

BLACK TIN.				
Mines.	Tons c. q. lbs.	Price per ton.	Amount.	Purchasers.
Wheal Sidney.....	4 3 3 10	£25 12 6	£275 2 0	Carvedras.
Fendeen Cons. ..	5 1 1 23	60 0 0	304 7 3	R. Michell & Co.
ditto.....	4 19 0 6	60 0 0	297 3 0	Bolito & Sons.
Gt. Wh. Vor Utd.	47 9 2 12	—	3155 3 4	—

COPPER ORES.				
Mines.	Tons.	Price per ton.	Amount.	Purchasers.
Knockmahon (ex Sea Bird).....	84	£4 8 6	358 4	J. Badley.
ditto.....	84	4 8 0	355 2	Newman, Keates, & Co.
ditto.....	84	4 8 0	355 2	Newman, Keates, & Co.
Lot 1 (ex "Augusta").....	7	10 8 6	76 0	Newton, Keates, & Co.
2 (ex "Egyptian").....	60	7 8 6	471 0	J. Keys & Son.
3 (ex "Meanda").....	29	8 6 6	250 1	ditto
ditto.....	29	8 6 6	250 1	ditto
4.....	56	7 12 6	405 4	St. Helen's Co.
5 (ex "Betty").....	38	7 12 6	273 1	ditto
6.....	34	7 6 6	258 4	J. Keys & Son.
7 (ex "British Queen").....	54	7 12 6	391 2	ditto

COPPER ORES.							
Sampled May 25, and sold at Swansea June 24.							
Mines.	Tons.	Produce.	Price.	Mines.	Tons.	Produce.	Price.
Cobre.....	104	134	£10 15 6	Knockmahon.....	48	9½	£7 15 6
ditto.....	103	133	10 17 0	ditto.....	45	11	8 19 6
ditto.....	100	134	10 16 6	Connorree.....	100	2½	1 17 0
ditto.....	90	135	10 16 0	ditto.....	80	2½	1 17 0
ditto.....	81	134	10 12 6	West. Ass. j	53	15½	12 6 0
ditto.....	64	244	19 0 6	Min. Ass. j	49	14½	12 6 0
ditto.....	16	57½	48 0 0	Spanish Ore.....	30	—	—
ditto.....	2	36½	27 18 0	ditto.....	19	1½	0 3 0
ditto.....	27	40	31 16 0	ditto.....	8	—	3 17 0
ditto.....	98	135	10 17 6	Burnt Ore.....	45	3½	2 6 0
ditto.....	30	32	25 1 6	Brit. Regulat.	37	30½	29 3 0
ditto.....	10	9½	7 14 0	Californian.....	29	6½	5 0 6
Berehaven.....	120	10½	8 3 6	New Cornwall	22	17½	14 10 0
ditto.....	75	10½	8 7 6	Dyngwrm.....	14	12½	10 2 6
ditto.....	100	10½	8 2 0	Gourock.....	9	5½	3 15 0
ditto.....	44	10½	8 6 0	ditto.....	2	12½	10 5 0
ditto.....	88	9½	7 15 0	Cronebane.....	15	3½	2 3 0
ditto.....	7	9½	7 11 6	ditto.....	9	3½	1 18 0
ditto.....	115	10½	8 11 6	Tigrony.....	11	4	2 16 0
Knockmahon.....	62	11½	9 5 0	Cronebane.....	2	27½	30 2 6
ditto.....	132	11½	9 6 0	ditto.....	27	27½	29 2 6
ditto.....	9	9	9 12 0	Cape Ore.....	3	24½	19 6 0
ditto.....	90	12½	9 19 6	Australian ore.....	3	9½	6 15 6
ditto.....	105	25½	4 0 6				

THE SARDINIAN COMPANY (LIMITED).

Incorporated under the Companies Act, 1862.
Capital £100,000, in 4000 shares of £25 each. £1 on application, and £4 on allotment.
One-half of the capital has already been subscribed.
DIRECTORS:
B. FABBRICOTTI, Esq. (Fabbricotti Brothers), Leghorn, London, and New York.
WM. LEFAUX, Esq., Llandudno, Montgomeryshire (Director of Mid-Wales Railway).
H. LIND, Esq., 19, Kensington-square, London.
G. SEMENZA, Esq., 35, Old Broad-street, London (Concessionaire of Royal Sardinian Railway).
J. MACKILL SMITH, Esq. (Mackill Smith and Co.) Old Broad-street, London.
SOLICITORS—Messrs. Ashurst, Morris, and Co., Old Jewry.
BANKERS—The Consolidated Bank.
SECRETARY (pro tem)—J. T. Wood, Esq.
OFFICES.—35, OLD BROAD STREET, LONDON, E.C.

ABRIDGED PROSPECTUS.

This company has been formed for the purpose of developing the resources of the rich and fertile island of Sardinia, which is now about to be intersected by railways.
Full prospectuses may be had at the offices of the company, or at the Consolidated Bank, No. 7, Fenchurch-street, London, on or before Wednesday, the 23d June inst., on which day the list will be closed.

PANT-Y-BUARTH AND UNITED LEAD MINING COMPANY (LIMITED).

Incorporated under the Companies Act, 1862.
Capital £100,000, in 10,000 shares of £10 each. 10s. per share to be paid on application, and £1 per share on allotment.
No call to exceed 10s. per share, of which three months' notice will be given; and it is conditionally anticipated that one-half of the capital will be amply sufficient for all purposes.

DIRECTORS:
EDWIN CARTER, Esq., St. Columb Bank, Cornwall.
JACOB L. ELKIN, Esq., Windsor Chambers, Great St. Helen's.
EDMUND GILBERT HAMLEY, Esq., Coroner for Cornwall, Bodmin.
R. HEALEY, Esq., 11, Canterbury Villas, Malda Vale.
Capt. JOHN MATTHEW, Brunswick Villa, Barnet.
Lieut.-Col. NAPIER STUART, M.P., 13, Portman-square.
SECRETARY—William Healey, Esq.
CONSULTING ENGINEER—John Hitchens, Esq., St. Michael's House, Cornhill, London.
LOCAL ENGINEER—T. L. Cottingham, Esq., Mold.

BANKERS:
London Messrs. Roberts, Lubbock, and Co.
Chester Messrs. Williams and Co., Old Bank.
SOLICITOR—J. Perry Godfrey, Esq., South-square, Gray's Inn, W.C.
AUDITOR—F. W. Spooner, Esq., 10, America-square.

BROKERS:
London Hubert B. Rye, Esq., 77, Old Broad-street.
Chester John Jones, Esq., Westminster-buildings.
TEMPORARY OFFICES.—WINDSOR CHAMBERS, GREAT ST. HELEN'S, E.C.

This company has been formed for the purchase and working of the above mines, situated about three miles north-west of Mold, in Flintshire; held under favourable leases at very low royalties. These mines have already been worked to dead-water level, and numerous shafts are in good order. The property comprises an area of about 2436 acres, and, according to the Ordnance Survey of 1850, was proved to contain 13 lead lodes, producing lead ore realising the highest price in the market of any mines in North Wales, viz., £14 and £16 per ton.

The locality in which these mines are situated is well known to be one of the richest for lead in the United Kingdom; and the neighbouring mines, including Rhosmor, &c., have for a long period paid, and still pay, very large dividends, and in the case of the Miners' Mines, in the adjoining district of Wrexham, the dividends for the last year amounted to not less than 116 per cent. per annum upon a paid-up capital of £45,000, and the sales of lead ore and blende for the quarter ending 31st March, 1864, amounted to £29,750.

The reports, which are from mining engineers of the highest respectability and standing, justify the expectation that similar results will attend the development of Pant-y-Buarth lodes in the Pant-y-Buarth United Mines.

Some of the lodes of these mines were worked at great profit some years since, giving immense quantities of ore; but the directors of the company then existing were unwilling to expend the amount necessary for erecting proper pumping machinery, the price of lead being then only £5 per ton, and the royalty £1 per ton. Large quantities of ore were being raised from the several shafts, when the water put a stop to the works, and from one mine alone, the month previous to the stoppage, upwards of 500 tons of ore were sold, and large quantities were ready to be brought up, which can be raised immediately the water is removed, and which will at once realise a large profit.

It is now intended to erect engines of a maximum power, ample for all future contingencies, as well as for the present effectual working of the mines; and, further, to make the best modern appliances and improved machinery, so as to economise to the utmost both steam and water power.

A conditional contract has already been entered into with a highly responsible engineer to erect the requisite steam-engines, buildings, and machinery to drain the principal mines, to place engines, &c., to three working shafts, and to provide all the requisite crushing-machines, trucks, &c.; and the engineer is so far satisfied as to the value of the mines, that he has consented to be paid one-half of such contract in shares of the company.

The present proprietors have expended large sums of money since the mines were worked as above mentioned, and arrangement have been made with them for the purchase of the leases, plant, &c., for the sum £15,000, of which one-fifth is to be paid in cash, and the remaining four-fifths in shares. There are numerous buildings on the property necessary for the works, and 26 shafts, varying from 40 to 220 yards deep, so that immediately the water is removed active and profitable operations can be commenced.

The capital of the company has been fixed at £100,000; but it is pretty certain that the mines will yield large returns so soon as the water is drained, rendering it in that case unnecessary to call up more than one-half of the entire amount.

A large number of the shares have already been taken, and the directors will proceed to allot them so soon as the other necessary applications are received. In the event of no allotment being made, the deposit will be returned without deduction or delay.

Prospectuses, plans, and forms of application may be obtained of the secretary, at the offices of the company.

FORM OF APPLICATION FOR SHARES.

To the Directors of the Pant-y-Buarth and United Lead Mining Company (Limited).
GENTLEMEN.—Having paid to your bankers the sum of £ being the deposit of 10s. per share, I request you to allot to me share of £10 each in the above company; and I hereby agree to accept such shares, or any less number that may be allotted to me, and to pay the further sum of £1 per share on allotment, subject to the Articles of Association of the Company.

Name in full
Profession or description
Residence in full
Usual signature

Date

GREAT WHEAL METAL TIN MINING COMPANY (LIMITED).

Incorporated under the Companies Act of 1862, with Limited Liability.
Capital £20,000, divided into 10,000 shares of £2 each.
Deposit 10s. per share on application, and 10s. per share on allotment.
No further call will be made for six months, as it is considered by competent authorities that from £4000 to £6000 will be sufficient to bring the property into a dividend-paying state.

DIRECTORS:
Sir WILLIAM SMITH (Director of the Great Laxey Mining Company), Carlton Club, William A. Dunn, Esq. (Merchant, Newcastle-upon-Tyne and London), 11, Kensington Park Gardens, W.
JOSEPH TILSTON, Esq. (Director of the General Rolling Stock Company), Chestnut-place, Baywater, W.

JOHN JOHNSTONE, Esq., J.P., Friarstown House, County Leitrim, and 31, Belgrave-road, S.W.
CHARLES JOSEPH CARTER, Esq. (Coroner for Kent), Catherine House, Blackheath, S.E.

TEMPLETON HAWKINS, Esq., 39, Woburn-place, W.C.
LOUIS LEVINSON, Esq. (Levinson and Co., Merchants), Consul for Chili, 31, Threadneedle-street, E.C.

EDWARD CHARLES LEA, Esq. (Mos, Lea, and Co., Merchants), 16, Water-lane, E.C.
W. S. SUTTON, Esq., Annan Lodge, Brighton.

WILLIAM CREMER, Esq. (Director of the Torricelli Mining Company), 69, Sloane-street, S.W.

BANKERS:
London The Metropolitan and Provincial Bank (Limited), 75, Cornhill, E.C.
Cornwall Messrs. Vivian, Grylls, Kendall, and Co., Helston.

AUDITORS:
Sydney G. Smith, Esq., Public Accountant, 19, Coleman-street, E.C.
And one member to be elected by and from the body of shareholders.

SECRETARY (pro tem.)—Mr. FRAS. H. HEARN.
OFFICES.—GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C.

ABRIDGED PROSPECTUS.

This company has been formed for the purpose of working a valuable piece of mineral property, situated in the parish of Breage, county of Cornwall, in the Great Wheal Vor and the Wheal Metal mining district.

The present rich lodes in Wheal Metal pass through the Great Wheal Metal sett, and the Great Wheal Vor elvan course: the latter forms a junction with the whole of the lodes in the Great Wheal Metal Mine. (See geological plan.)

The main lode in Great Wheal Vor has produced upwards of £2,000,000 worth of tin, and that at a time when the ore was selling at £30 to £40 per ton, at which price profits to the extent of £3000 and £4000 per month were returned to the shareholders. The shares in Great Wheal Vor (or Wheal Metal Company) were selling at £6 per share twelve months since, which would amount to £36,000 for the entire property. Important discoveries have since been made, and the mine is enhanced in value upwards of £200,000, the present price being £240,000; independent of which, it is giving dividends to the extent of £18,000 to £20,000 per year.

The directors have consulted some of the first mining authorities in the county of Cornwall, including the land and mineral surveyor for Cornwall and Devon; the mineral agents of the Rev. H. M. St. Aubyn and of J. J. Rogers, Esq., M.P.; the managers of Great Wheal Vor, Great Wheal Fortune, Great Work, Leeds and St. Aubyn, West Grylls, Gurly, and of Stithy Carmel, &c.; the whole of whom speak in the most positive terms as to the certainty of success in this undertaking.

Prospectuses and forms of applications for shares may be obtained of the bankers, directors, or secretary.

GREAT WHEAL METAL TIN MINING COMPANY (LIMITED).

—Notice is hereby given, that NO APPLICATIONS FOR SHARES will be RECEIVED AFTER the 18th inst. for London, and the 20th inst. for country subscribers.

By order, FRAS. H. HEARN, Sec. (pro tem.)
Gresham House, June 15, 1864.

THE CREDIT MOBILIER COMPANY OF LONDON (LIMITED).

14, THREADNEEDLE STREET, LONDON, E.C.
BANKERS:
The London and Westminster Bank, Lothbury, E.C.; and the Union Bank of London.

The company discount approved mercantile and other bills, make advances on negotiable securities, and undertake financial business generally.

WILLIAM HALL, Sec.

WATSON AND CUELL'S MINING CIRCULAR.

published every Thursday morning, price 6d. or £1 is. per annum, contains Special Reports of Mines, and the Latest Intelligence from the Mining Districts, from an exclusive resident agent; also, Special Recommendations and Advice upon all subjects connected with Mining, and interesting to investors and speculators. A Record of Daily Transactions in the Share Market, Metal Sales, and General Share Lists, &c. Edited by J. Y. WATSON, F.G.S., and published by WATSON AND CUELL, 1, St. Michael's-alley, Cornhill, N.B. Messrs. Watson and Cuell have made a selection of a few difficult and progressive mines, which they have reason to believe will pay good interest, with a probability, also, of a rise in value, the names and particulars of which will be furnished on application.

MR. HOPTON'S NEW WORK, entitled

CONVERSATIONS ON MINES, BETWEEN "FATHER AND SON," will have 12 plans on ventilation, and of working out coal, with plans to show how to distil, and also lay the workings on a plan.

Address Mr. J. J. CAMERON, Cropper's-hill Colliery, St. Helen's.
N.B.—The engraver requiring more time than at first expected, Mr. Hopton is very sorry the work is not yet ready. He thanks the subscribers for their great number of orders, and assures them every one shall be attended to.

On Thursday, the 30th inst., will be published, in 8vo., with lithographs and wood engravings, No. 1, price 1s. 6d., of

THE GEOLOGICAL MAGAZINE,

OR MONTHLY JOURNAL OF GEOLOGY.
Edited by T. RUPERT JONES, F.G.S., Professor of Geology, &c., in the Royal College, Sandhurst.

Assisted by HENRY WOODWARD, F.G.S., F.Z.S., British Museum.

London: Longman, Green, and Co., Paternoster-row.

Now ready, price 5s., by post 5s. 4d.

STATISTICS OF AND OBSERVATIONS UPON THE MINES OF CORNWALL AND DEVON,

For 1861, 1862, and 1863.
By THOMAS SPARGO, Mining Engineer, Stock and Sharebroker, Gresham House, Old Broad-street, London, E.C.

Just published, price 1s., by post 1s. 1d.

HISTORY OF THE RISE AND PROGRESS OF MINING IN DEVONSHIRE,

From the time of the Phenicians to the present.
By G. CHOWEN.

London: Published at the MINING JOURNAL office, 26, Fleet-street, E.C.

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MINING ENGINEER,
3, GLOUCESTER TERRACE, CHURCH STREET, KENSINGTON, W.
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Spanish, Mexican, or South American mines are considered by Mr. CLEMENT as first-rate properties for investment, Norwegian silver and copper mines as second to none.

Notices to Correspondents.

* Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journals should be regularly filed on receipt: it then forms an accumulating useful work of reference.

SIR,—Can any of your readers give me information as to the Devon New Copper Mining Company (Limited), late of 16, Barge-yard Chambers, Bucklersbury? Their offices have now been closed for many months.—AN UNFORTUNATE SHAREHOLDER.

EAST PANT-DU MINING COMPANY.—SIR: Noticing in last week's Journal a paragraph relating to this company, and some remarks as to the purchase of the property from Mr. Samuel Merryweather, I, as a late director and shareholder of the Colomendy Mine, now, I believe, forming a part of the East Pant-du sett, entirely dispute Mr. Merryweather's power to sell the Colomendy Mine, he having, without the consent of the directors, taken upon himself so to do. There are others interested like myself, who have paid for shares to Mr. Merryweather, and have received no return of any kind. I may inform those interested in the East Pant-du Company (Limited) that Mr. Merryweather has no power to sell, and that steps are now being taken towards the establishment of a sound and legal claim to that portion of the property lately described as the Colomendy Mine.—T. H. W. THOMAS, *Pinnock-court, Old Broad-street.*

IMPROVEMENTS IN LOCOMOTIVES.—It will, of course, be understood that the invention of Mr. E. Slaughter, of the Aven-side Engine Works, Bristol, described in last week's Journal, is applicable only to underground railways, such as the Metropolitan, the inventor having no idea of applying the condenser to the locomotives of ordinary open railroads.

CAMBRIAN GOLD MINE.—Having noticed the request of one who calls himself "A Shareholder," among the "Notices" of last week's Journal, I, as having now for some time been acquainted to some degree with the mining affairs in this district, take this opportunity to make a few observations on one of the mines alluded to—the Cambrian Gold Mine, and more particularly on the prospects. Judging from the nature of the quartz, which I have often seen carried down to be stamped, I have no hesitation in saying that gold might be obtained from it, provided it be put to the test by being pounded down, and washed in the battery. I come to this conclusion, because when compared it proves to be of the same kind, and almost identical, with that sort of quartz in which gold is visible, and from which it is actually extracted; and more, conjecturing from the nature of the lodes, which, according to the information I have lately received concerning them, have a very promising aspect, as well as from the stuff I myself have seen produced therefrom, I have not the least doubt but that gold will be produced in paying quantities, and that the Cambrian Gold Mine will shortly be numbered among the most flourishing—capable of being compared even with the Clogau itself.—A CONSTANT READER.

NORTH DEVON SILVER-LEAD MINING COMPANY.—May I be allowed to correct an error which crept into the Journal of last week, stating that this company has an office of reference in Threadneedle-street. Mr. Ward recently visited the mine at Combsmartin, and can consequently furnish information respecting it. He has also received at his office a magnificent stone of silver-lead ore, weighing about 700 lbs., as stated in the Journal, but the company has no office of reference in London.—THOS. FIDLER, Sec.

BORING MACHINES.—A letter forwarded to Mr. Crease, at the address given in the advertisement, will meet with every attention.

GREAT DEVON AND BEDFORD (Coleharton).—I am sure you will find space for the few words I have to say respecting the quotations of shares in this mine. They are not merely nominal, but venal, for it has come to my knowledge that a person has been for months paying contango heavily upon shares sold, and which he cannot get hold of. To enable him to complete, he has not only quoted at a low premium, but written letters of disparagement to effect his purpose. The shares are well held, and there are, in fact, scarcely any transactions at all, for the holders wisely await results which all who have seen the property feel sure will come. The Devon Great Consols did not reach their first great result until they got to the 40 fathom level.—A LOVER OF FAIR-PLAY.

CAMBRIAN YEAN.—How is it the reports of this mine never appear in the Journal? I suppose we shall see enough of it as soon as those interested have done share dealing.—AN OUTSIDER.

VANCOUVER COAL COMPANY.—In your report of the meeting of this company, in the Journal of May 7, there are several inaccuracies. The same person (Mr. Galsworthy) is represented as complaining of a 5 per cent. dividend for the half-year, as the company had earned 17 per cent., and at the same time, saying these profits had not been realised. But it is also said, "the resolution delaying the dividend was put and carried, whereas the dividend was declared." This dividend has since been paid, the warrants being issued on May 31. Also, in the first column of the same page, it is stated that the Vancouver Coal Company propose to call a special meeting for authorising the issue of the 3500 unallotted shares, &c.; and the same paragraph further on would lead one to suppose that only one dividend of 5 per cent. could be paid out of the 15 months' working, whereas two have been, and three might have been. But there were no unallotted shares left, and the 3500 were entirely new shares, to rank as the old ones in all respects, and they have all been taken by the shareholders. I hope to see a correction with respect to the dividends made in the last page of the Journal, 10s. having been paid, 5s. in Sept., 1863, and 5s. in May, 1864. I may state the company is most prosperous.—A SHAREHOLDER.

THE CAMBRIAN AND DOLFRYTH GOLDFIELD MINES.—It strikes me as very strange that a Shareholder should make such a request as that which appeared in last week's Journal, on a question touching which he ought, from the nature of the case, to have been thoroughly acquainted. It seems to me that he does not avail himself of the advantages provided in the Mining Journal to gain knowledge of the particulars he referred to, provided his object be to dispel his ignorance. There is a deal of absurdity, and it shows a lack of prudence in one to throw questions of this nature, in so indefinite a manner, before the public, especially while every "shareholder" ought to know that it is his own duty to make all his applications, and that it belongs to the office of the captain and secretary of a company to give such information. In my view of the question, the only circumstances justifying an enquirer to lay a matter of this nature before the public would be the refusal of the officers to give the information required.—G. W. N.: June 15.

The insertion of several letters and articles is postponed, to appear in a Supplement to next week's Journal.

WHEAL CREBOR.—In last week's Journal Mr. Lelan states his opinion of Crebor, as follows:—"Crebor is by no means encouraging in its prospects." The public will take this for as much as it is worth, but he ought to state his reasons. In the Journal in February last Mr. Lelan announced the success of his most startling prognostication, as follows:—"As I predicted, they have the cross-course in the shaft at Crebor." A most astounding prediction, considering the shaft was east of the cross-course, and the latter dipping towards it. The mine is looking well, and opening up satisfactorily; it is worked cheaply, and will soon tell for itself. The engine-shaft is sinking below the 90; the cross-course is in the east end of it, and a large ore lode in the bottom. In the 96 west the lode is 5 ft. wide, with 1 ton of copper ore per fathom, and improving. The 96 east is producing 1 ton of copper ore per fathom—improving, and getting under the rich lode gone down from the 84, reported as 8 tons per fathom, in the bottom of the winze. These things are new since Mr. Lelan referred to the mine last year, and so good as to considerably outweigh Mr. Lelan's remarks in last week's Journal. There are also other good points referred to in the agents' report.—A SHAREHOLDER: June 15.

MINING TERMS.—"Y." (Chester) had better purchase our "Glossary of English and Foreign Mining and Smelting Terms" (price 2s.), which can be procured through any bookseller or news agent.

EAST DEL REY.—NORTH DEL REY.—I have perused with great interest the letter in last week's Journal from "A Shareholder in both Companies," and in conjunction with him and many others I have looked with some anxiety for an explanation of the circumstances detailed in a letter in the Journal of May 21. Your correspondent points out many advantages that would result in the amalgamation of the above companies. The only disadvantage I can see is in the supervision of the gold works at the mines: to do this effectually by one person at one mine is difficult—at two or three impossible. Gold of great value occupies a small space, and passes through various stages and many hands before its realisation. A constant supervision and a variety of checks are, therefore, indispensable. I understand that at the St. John del Rey these are very numerous, and excellently adapted to the purpose. The superintendent himself

has nothing to do with the gold, but to scrutinise its security for the benefit of the company. The mine captains, quite independent of him, give an account every ten days of the number of tons of ore crushed, and its value per ton. This confirms the superintendent's account, and is most satisfactory. Why should not similar provisions be adopted in both companies?—A SHAREHOLDER.

IMPROVED MINING MACHINERY.—A recently-formed mining company, about commencing operations on a large scale, are desirous of obtaining information as to the best description of materials and general appliances required. With this view, they propose to give a sum of 20l. for a good epitome of the most approved machinery and mechanical apparatus essential for an extensive mining establishment. No elaborate details are required, merely a brief recital of inventions or articles, with their chief points of excellence, names of makers, prices, &c.—the object being to acquire precise particulars of the more recent improvements in mining and mechanical engineering materials before giving out their orders.

[A cheque for the above amount has been handed to the Editor of the Mining Journal, who has undertaken to forward all papers received to the donors, and to pay the amount to the writer of the one which they shall deem most deserving of it. It will, of course, be understood that the prize paper will be published in the Journal. All others will be returned, or published, as may be arranged. The desire to procure the most efficient machinery not being by any means confined to those offering the present premium, the Editor will undertake to publish brief mechanical descriptions of any improved apparatus which may have been invented by those not disposed to treat the subject generally, upon being furnished with the necessary particulars.]

THE MINING JOURNAL
Railway and Commercial Gazette.

LONDON, JUNE 18, 1864.

There is a common saying, "Englishmen make machines, and foreigners write descriptions of them," and certainly a greater proof of its truth, whether we speak of mechanics alone, or of all the numerous branches of engineering science—mining engineering included—could hardly be found than in the advertisement in which is offered, through the MINING JOURNAL, a premium for the best epitome of the most approved machinery and mechanical apparatus essential for an extensive mining establishment. We state a fact which we think no one will be bold enough to contradict, when we say there is no book in the English language which will convey to those engaged in mining pursuits any good idea of the machinery required, either to sink into the earth, extract the mineral therefrom, or to separate the valueless ingredients from the ore after it is brought to the surface, and to purify it for the market. Now, this is a want which is not felt either in Germany or France, for in the languages of both of these countries there are several excellent works on mining, of which the student can avail himself, and from which in a short time he can learn the experiences which it has required years, and it may be centuries, on the part of those who have preceded him to bring to perfection.

Until quite lately we possessed no work in English on metallurgy which could be depended on as an authority, or which was sufficiently accurate in its description of metallurgical processes to act as a guide to either smelter or student. And yet we now see how fallacious was the idea, that we could not describe what we most efficiently practise, since we can no longer complain of a want of a metallurgical authority, for we possess the most perfect work on this science which has as yet been written in any language. We, of course, refer to the two noble books entitled "Dr. Percy's Metallurgy." In them we find, as undoubtedly we shall find in those volumes which we hope will follow from the same author, a stupendous mass of matter, which could only be the result of years of diligent study and of wearisome toil. We know full well that in the practical working out of the immense number of analyses with which Dr. Percy's books teem, and which so greatly enhance their value, the author must have received great practical aid from his assistants in his official capacity as Professor of Metallurgy at the Royal School of Mines, though we would not for a moment detract from the honour due to the mastery genius which arranged the work as a whole. Yet, we can but express our opinion that if the great scheme for mining education which has been so carefully elaborated at Jermyn-street, and which is now, at last, gaining an important hold on the mining world, had produced no other fruit than "Dr. Percy's Metallurgy," we should say the support given to that school by the nation had not been entirely thrown away. If the Professors at Jermyn-street were no other than theorists in the several branches of knowledge they are employed to teach, as some would have us believe, they would never have suited the practical tendency of the day, nor could from one of their staff have emanated so perfect a practical guide to the smelter as the work we have referred to.

We cannot now refrain from expressing a wish (although with due deference we give utterance to it), that the Professor of Mining at Jermyn-street would follow in the steps of his brother professor, and give us a corresponding work on mining, and so confer a lasting benefit on the mining community at large. We have had the pleasure of hearing Mr. SMITH lecture, and each time it has only made us long that he would publish the results of his mining experiences, for we are convinced there is no man in England more capable of supplying our need in this matter than Mr. WASHINGTON SMYTH. Now, what we want is a work which shall give us not only a practical account of all the machinery employed in metalliferous and non-metalliferous mining abroad and at home now-a-days, but also a history of mining—that is, an account of the gradual progress of mining machinery. This latter want is peculiarly apparent in these days, when men are rushing to the Patent Office to secure the exclusive right to a design which they deem new, and which we know in one case was nothing but a clumsy adaptation of the old pestle and mortar. Such a fact as this displays an extraordinary ignorance of the history of mining—an ignorance we should not have to lament so often had we some good work on the subject to appeal to.

Again, those acquainted with mining in Cornwall will allow that as the traveller passes in that county from mine to mine, and from district to district, he finds each local captain varies the form of his dressing machinery, according to his own peculiar notions, and that he is guided by no rule in their construction, nor in the laying out of his floors generally. Thus, some advocate oblong buddles, others round buddles, some short frames, others long ones, and yet each passes his tinstuff through the same sized stamp grating, and each has the same matrix to separate from his ore, and still each captain will be only too ready to profound a theory which shall prove his own idea the most perfect. Miners there are of great experience we know in England, yet, from the great mistake of their having neglected to record their experiences, we continually see instances of men stumbling over the same errors as did their forefathers before them. It is but as yesterday that a well-known coal mine manager propounded the long-explored theory that it is more advantageous to course the air in a coal mine in one stream along the workings than to divide it into several streams, yet the slightest historical knowledge on the subject would have shown him that the plan he now proposes as a new one was the common practice 100 years ago—a practice which recent investigation has proved to be the most dangerous of all to the miner.

We have stated that we want a handbook of mining: still we cannot but acknowledge the task of producing it a most difficult one. The author of the work must, of necessity, be a man acquainted with all the mineral districts of the world, to enable him to compare the relative merits of the numerous machines employed in each; and this acquaintance must not be a superficial one, but a thoroughly practical one, and yet this practical knowledge must be combined with powers of generalisation, and, that most rare of all gifts, the power of appreciating the relative importance of the endless variety of ideas submitted to his judgment, unbiassed by any prejudice in favour of a particular one. He must, in short, be a good mechanician, a good mineralogist, and understand enough of geology to appreciate the endless variety of deleterious bodies which the ore-dresser has to separate.

DISCOVERY OF COAL AT SUMATRA.—Discoveries of coal of considerable importance have been made at Sumatra. The bearings were first "recognised" in 1858, but they are only now becoming available. These new coal bearings extend over a superficies of more than 10,000,000 square yards, and have an average thickness of nearly 394 in. The cubical content of the coal brought to light will thus be seen to be very great. The bearings form a series of hills from 20 to 25 miles from the chief town of the Bencoulen district, and they are situated in a rough, uneven country, divided by numerous torrents, which render access to it difficult; it may be added that they are on the western spur of the mountain chain which divides the island throughout its length. Some experiments with the Sa-

extra coal have been made at Cherbourg, by order of His Excellency the Comte Chasseloup-Laubat, and the properties of the new combustible—now utilized by vessels of the Dutch Navy which touch at Bencoulén—have been closely scrutinized. The principal bearings are situated near the Kamoung torrent, not far from the small river of Kindanhati. Four explorations made at this point indicated the following results:—First bed, under water, 5 ft. thick; second bed, coal and clay alternating, 11 ft. 4 in. thick; third bed, coal and clay alternating, 5 ft. thick; fourth bed, coal and clay alternating, 15 ft. 8 in. thick. The coast of Bencoulén, exposed to all the violence of the sea and wind, would be a serious obstacle, as it only offers insecure and uncertain anchorage; and the roadstead created artificially at the embouchure of the Bencoulén river, by means of a jetty, has been nearly filled up by the sand which the river discharges. Extraordinary works would be necessary to render the spot efficiently available; and it would, perhaps, be desirable to follow the road, which is nearly in a working condition, established along the coast from Bencoulén to the bay of Poulo. This bay is tolerably extensive, but various works are required to be carried out in it. The distance from Bencoulén to the bay of Poulo is 11½ miles, and the nature of the country would not offer serious difficulties for the construction of a railway, which must be carried out in order to put the river and the point of embarkation in prompt and regular communication with each other.

THE SLATE TRADE—WELSH AND IRISH SLATE.

Great attention is at present directed to Irish slates, in consequence of the announcement that slates of a quality equal to the best slates of the Festiniog district of North Wales can be produced at half the cost of the least expensively managed quarry in the principality. Most of the Welsh slate quarries are situated some distance from the port of shipment, and it is not infrequently happens that much inconvenience arises from the debris, for the deposit of which heavy surface rent has to be paid; whilst there are Irish quarries where the slate may be worked from the face of the cliff, and put on board vessels from a quay at the mouth of the quarries open to the sea, and the waste can be cast into the ocean as fast as created. The subjoined are comparative lists of prices of Welsh and Irish slates at the quarries, from which it will be seen that a vast economy may be effected by employing the latter slates, even where the distance to which they have to be carried is so far increased as to involve a larger outlay for freight:—

NEW CRAIG DDU QUARRY, FESTINOG, NORTH WALES.

Description.	Sizes.	First quality.	Second quality.
Princess	24 x 14	215s.	170s.
Duchess	24 x 12	180s.	145s.
Small duchess	22 x 12	150s.	115s.
Marchioness	22 x 11	135s.	105s.
Countess	20 x 10	122s.	88s.
Wide viscountess	18 x 10	90s.	60s.
Viscountess	18 x 9	75s.	57s. 6d.
Wide ladies	16 x 10	62s.	55s.
Ladies	16 x 8	41s.	29s.
Small ladies	14 x 8	25s.	23s.
Doublets	13 x 7	20s.	18s.
Singles	12 x 6	20s.	16s.

PENRHYN QUARRY, BANGOR, NORTH WALES.

Duchess	24 x 12	170s.	132s.
Small duchess	22 x 12	132s.	102s.
Countess	20 x 10	112s.	80s.
Wide viscountess	18 x 10	80s.	54s.
Viscountess	16 x 10	62s.	48s.
Wide ladies	16 x 8	49s.	36s.
Ladies	14 x 12	49s.	33s. 6d.
Small ladies	14 x 8	33s.	27s.
Wide singles	13 x 10	36s.	28s.
Singles	13 x 7	20s.	18s.
Small	12 x 8	18s.	16s.

BANTREY BAY QUARRY, COUNTY CORK, IRELAND.

Princess	24 x 14	100s.	90s.
Duchess	24 x 12	90s.	80s.
Small duchess	22 x 12	80s.	70s.
Small duchess	22 x 11	70s.	65s.
Countess	20 x 10	65s.	60s.
Countess	18 x 12	60s.	50s.
Wide viscountess	18 x 10	50s.	45s.
Wide ladies	16 x 10	45s.	40s.
Wide ladies	15 x 10	40s.	30s.
Sundries	—	15s.	—

COLLIERY ACCIDENTS RELIEF SOCIETIES.

A society has been projected for North Staffordshire which, to judge from the prospectus, will be worthy of imitation in the mining districts generally; it is proposed that the subscribers shall have the right of recommending persons eligible for relief in proportion to the amount of their donations, and that bodies of workmen subscribing may exercise that right by one or more persons appointed by them as their representatives. The new society—the Colliery Accidents Relief Society for North Staffordshire—is intended to become the permanent society of which the proportion of the Hartley surplus allotted to the district is to form the first contribution. The committee of the Hartley Relief Fund have, from the surplus in their hands, appropriated and paid the sum of 656l. 11s. to the district of North Staffordshire, and this sum has been now invested in Five per Cent. India Stock, in the joint names of Messrs. W. T. CORP-AND, M.P., R. H. HAYWOOD, and J. A. WISE, and a temporary committee has been formed to establish a North Staffordshire Colliery Accidents Relief Society. This committee consists of Mr. SMITH CHILD, the Chief Bailiffs of Burslem, Fenton, Longton, Stoke, and Tunstall, the Mayors of Hanley and Newcastle, the Trustees above named, the Government Inspector for the district, and three gentlemen representing the North Staffordshire Coal and Ironmasters Association—Messrs. HEATH-COTE, TYNDALL, and WRAGGE. Mr. SMITH CHILD has generously offered to contribute 500l. towards the establishment of such a permanent institution, on condition that at least 1200l. be raised in the district in addition to his own donation and to the sum arising from the surplus of the Hartley Relief Fund. The honorary secretaryship has been temporarily undertaken by Mr. R. HORTON WYNN, and there is every reason to anticipate that the project will be brought to a successful issue.

It is intended that the rules shall be settled at the first meeting of the society, but a sketch is submitted explaining generally the views of the committee as to what they deem desirable. It is proposed—

That donors and subscribers to the society shall have the right of recommending persons eligible for relief, such right to be regulated in proportion to the amount of the donations or subscriptions, in a somewhat similar manner to the mode adopted by the North Staffordshire Infirmary.

That colliery accidents shall be held to include accidents at ironstone pits within the district.

That recommendations shall be either positive, after the subscriber has satisfied himself or herself as to merits of the case, or provisional, subject to enquiry by the society.

That recommendations shall be for a fixed weekly allowance for a fixed number of weeks; or, if considered more desirable, there may be two or more denominations of recommendations, having each a different value.

That the forms of recommendation to which each donor or subscriber is entitled shall be issued to him or her each year, and that such as are not used within the year shall lapse to the society, and the value thereof be added to its capital.

That the affairs of the society shall be under the management of a committee, to be appointed by the donors and subscribers; and that there shall be an officer of the society, paid for his services, who shall pay the allowances at places convenient to the recipients; and in the case of provisional recommendations shall make the necessary enquiries, and who shall keep proper books of the society's accounts.

That bodies of workpeople, as well as individuals, shall be eligible as donors or subscribers, in the name or names of some person or persons appointed by them, who shall be entitled, on their behalf, to the same rights as would be accorded to an individual donor or subscriber of like amount.

The contribution of Mr. SMITH CHILD being conditional upon the liberality of others in the district, it is to be hoped that the public and the working colliers will exert themselves to secure the subscription of the necessary sum which will ensure the successful establishment of a most useful institution. That there are many benevolent persons in the district who will be glad to avail themselves of the society for the administration of relief to sufferers by colliery accidents; and it is believed that the colliers will unite to contribute to the society, and to aid their unfortunate fellow-workmen, or their families, through its instrumentality, in preference to the plan of making a collection for the purpose on the next following pay day, and handing it over in one sum; a plan which is admitted to be open to many serious objections. It is urged that, although many proprietors of collieries in the district afford generous aid to their own workpeople, under circumstances of suffering arising from accidents, there are still numerous cases not reached or adequately aided; and the Government Inspector of Mines, while bearing testimony to the liberality of many employers, earnestly advocates an appeal to the general public for aid, by means of such a society as that now proposed. That there is every inducement for the colliers to exert themselves is obvious, since by the success of the project the operations of the relief fund will be commenced with nearly four times the sum at present in hand from the Hartley sur-

plus; whilst, in the event of the 1200l. not being subscribed, there will be no collection whatever, and the 656l. 11s. will be the only sum available—a sum too small in amount to be of any permanent utility to accomplish the object in view.

MINERAL RESOURCES OF SARDINIA.

From the earliest ages Sardinia has been favourably known for its mineral wealth, but it is only recently that the attention of English capitalists has been directed to it. Some twelve months since we alluded to the formation of the Sardinian Mining Company, and another company, which also proposes to give some attention to mining in the island—the Sardinian Company—with a capital of 100,000l., in shares of 25l. each, has now been inaugurated. It is mentioned that Sardinia produces all the staples of a semi-tropical climate—cotton, tobacco, fruits, wines, and grain of every description, the cultivation of which, with the aid of capital, modern implements, and machinery, might be increased to an immense extent. General trading, land, and mining operations will form important branches of the company's business, and the directors have already provisionally secured (subject to confirmation by a meeting of shareholders, to be held as soon as convenient after the allotment of shares) some valuable properties, with great capabilities, together with the services of a thoroughly efficient staff, which will be under the direction of a gentleman having the experience of many years' trading and residence in the island. It appears that the evil of the extent of commonage heretofore claimed and exercised throughout the island has been removed by the operation of the General Enclosure Act, which came into force in 1863. This has settled the long-vested question of communal and crown lands to the entire satisfaction of all locally interested. The vast excavations and heaps of scoriae still visible afford ample testimony to the extent of the operations carried on by the ancients. Silver was found in considerable quantities in former times, but it is now only obtained by extraction from lead, the ores of which metal are profusely scattered over various parts of the island. Lead mines are, indeed, almost the only mines now worked, and very favourable reports upon them have from time to time been published.

In his report to the Foreign Office, in 1860, Mr. Sackville West (the Secretary of Legation at Turin) remarked that the export of galena from Sardinia had increased from 5260 tons in 1856, to 14,607 tons in 1859; and he adds that this return shows that the produce of the mines of Sardinia might form a most valuable item in its exports, but the want of capital among many of the companies engaged in mining, and the want of spirit, system, and scientific and practical knowledge among all, greatly retard the development of their produce. More recently, in 1862, a writer of undoubted authority upon Italian mining affairs—Mr. W. Page Jervis—wrote in the *Mining Journal* that "the number of lead mines in Sardinia might be very great, and the desirability of soon turning them to account is unquestionable. Roads are still deficient, and the islanders laugh at the comforts of life, which they must be taught to appreciate before they can be roused from their proverbial lethargy. Sardinia used to be called by the Romans the granary of Europe; they also possessed extensive mines there. Roman lead slags abound in the island, attesting their great perseverance for centuries. One of the most interesting features connected with the prospects of Sardinia is the new industry which has sprung up, by the smelting of these ancient slags by several gentlemen, among whom the first was Sig. Serfetti, followed by his partner, M. Bosquet, as well as by Count Belmont, Sig. Melis, and others. The lead ores of Sardinia are not always very rich in silver, but many of the veins are extensive and large. Montepioni Mines produce carbonate and sulphate of lead, in addition to magnificent galena. No less than 15,000 tons of lead ore were raised in Sardinia in 1861. Among the chief mines—

Montepioni produced about	Tons	6380
Montevicchio	"	2740
Ingustatu	"	1490
Gennanari	"	195
Reigrazius (1860)	"	100

Still more recently, Mr. J. Howard Blackwell inspected the property of the Sardinian Mining Company, and in his report stated that in the valley below St. Benedetto, and upon the part of the estate towards Iglesias, is a large mineral vein of soft brown hematite, with galena scattered through it in small quantities; the vein can be seen for a considerable distance, and is well worth exploring. Beyond this vein, at the foot of the mountain, are a large number of old surface workings for lead. A small vein in their immediate neighbourhood, that had been worked at the surface like the rest, has been followed down to a depth of about 60 yards by the owner of the estate, and is now being worked to profit; this vein at the lowest part reached is about a yard wide, contains carbonate of lime and barytes, with a little percentage of iron and clay. There are from 8 to 10 in. of galena, of very good quality, quite pure, and free from intermixture of other mineral. The vein is soft and easily worked, and of much better quality than it was at the surface. On the slope of the mountain, above this vein, are again a number of old workings; a level has been commenced to intersect some of the lodes, but only carried a few yards. Higher up another level has been commenced, and shows at its mouth a vein about a yard wide, with 4 or 5 inches of galena; higher up again two large veins can be distinctly traced upon the surface. Beyond St. Benedetto, towards Domus Novas, is the property of Mergani, forming the opposite side of the same mountain. Here also are a great number of old workings at various points; a level or drift has been commenced near the base of the mountain, to prove some of the lodes on which are the old workings higher up. It has been carried about 70 yards, but must be continued 80 or 100 yards further to reach the lodes. Beyond Mergani again, and close to Domus Novas, is the mountain of St. Giovanni. Old workings are found here, and a vein has been opened about 1½ yard wide, showing a string of galena mixed with quartz of about 10 inches. To sum up, the whole of these properties consist of the mineral-bearing limestone; they are in the very centre of the mining district, having the valuable mines of Monte Ponì on the west, and Aqua Cotta on the east. He observes, further, that there is every indication of valuable lodes besides those already being worked, and he recommended operations on a large scale, which he had no doubt would realise large profits.

Although the lead mines are, as already stated, almost the only ones now worked, it is considered that the veins of silver, copper, zinc, antimony, and other metallic ores, are found in various parts of the island. Tradition asserts that gold was formerly extracted, but none is now worked, but there is an abundance of iron ore rich in metal of the best quality, and both anthracite and bituminous coal of various quality is found in close proximity to some of the richest deposits of iron ore. Means of transport for the minerals to the coast are essential to the development of these latent but most valuable resources, and it is not too much to expect that the mineral exports of the island will go on augmenting at even a greater ratio than during the last six years, confessedly large as that has been. The usual terms upon which mining properties are held in Sardinia are a direct lease from the Government, under which no royalty or rental of any kind is payable, beyond the Government tax of 3 per cent. upon the mineral produced, so that every facility exists for profitably working the mines.

FOREIGN MINING AND METALLURGY.

The reduction which has taken place in the rate of discount, and the improved tone of the monetary market, must be favourable to the prosecution of great enterprises, and the conclusion of some important contracts for rails is anticipated at Charleroi. The current of affairs may be said to be still good in Belgium, work being everywhere abundant, while there are numerous and sufficient orders on hand. Several Belgian collieries have concluded some important contracts with foreign masters. Thus, the Bonne Espérance Colliery has engaged to supply 60 tons per day to MM. de Dorlodot, and the Poirier Colliery 100 tons per day to the same firm. These affairs have, however, been concluded at a slight reduction upon the terms of last year. At one of the sittings of the Chamber of Representatives last week, the Minister of Finance, referring to a petition soliciting a reduction of tolls on the Charleroi Canal, announced that the whole subject of a reduction of tolls had been submitted to a commission charged with the task of studying it. It appears from official returns that during the first four months of 1864 the imports of coal from Belgium were 22,527 tons, and the exports 20,860 tons; in the corresponding period of 1863, the exports remain at about the same point as during 1862 and 1863; thus in the first four months of 1864 they reached an aggregate of 1,017,450 tons. As we are becoming statistics, we may append the following return, showing the imports and exports of iron, steel, &c., into and from Belgium during the first four months of 1864.

First with regard to imports:—	1864.	1863.	1862.
Unworked steel	861	633	603
Iron minerals	55,519	56,928	28,314
Rough pig and old iron	1,782	1,947	710
Nails	27	130	111
Iron wire	—	130	114
Rails	—	1	—
Plates	2	16	2
Other iron	379	248	324
Worked pig	88	33	23
Works in beaten iron	166	165	117
Engines and machinery	919	1,345	897

The exports stand thus:—	1864.	1863.	1862.
Unworked steel	25	44	22
Iron minerals	55,625	76,748	66,853
Rough pig and old iron	9,792	10,643	12,484
Nails	4,861	4,771	5,000
Iron wire	507	120	356
Rails	18,797	14,149	8,439
Plates	5,112	2,555	2,556
Other iron	10,730	10,174	5,397
Worked pig	1,329	129	384
Works in beaten iron	709	366	301
Engines and machinery	2,704	3,714	2,500

These figures, which are generally satisfactory, speak for themselves. It will be seen that a large increase has taken place this year in rails, plates, worked pig, &c., fully confirming the reports made under this head as to the condition of metallurgy in Belgium.

At St. Dizier affairs remain very quiet as regards pig, and are also in a languishing state as regards iron. Quotations continue to present so little change that they may be almost said to be stereotyped. Pig has only a nominal quotation, at former rates, that is 4l. 12s. to 4l. 14s. per ton for charcoal-made. The sale of iron is limited to the strict wants of purchasers. First-class rolled merchants' irons have made 9l. to 9l. 4s. per ton, with a scale of 4s. to 8s. per ton per class; first-class sheets, 9l. 16s. to 10l. 4s., with a scale of 12s. to 16s. per ton; and special irons 9l. to 9l. 4s. per ton, with a scale of 4s. to 8s. per class. Hammered irons, 10l. 4s. to 10l. 8s. per ton (merchants' bars). Advice received from the Nord group state that the situation of the metallurgical works of that district has not changed, and that the various establishments are scarcely sufficiently provided with orders. The works of a canal lateral to the Marne will, it is stated, be continued this year with redoubled activity. It will be recollected that the St. Dizier Canal was decreed some time since to assist Hente-Marnaise industry to support the reaction of the reduction of customs' duties, but the funds allotted hitherto for the works have been insufficient; in five months we shall enter into the second period of the Treaty of Commerce, which brings with it each reduction of duties, and, with the sums devoted annually to the work by the State, it would not be before four years that this means of communication would be turned to profitable account. It is stated, however, that a certain number of industrials of the Lower Marne, the Blaise, and the Nord have just adopted a combination, in accordance with which funds will be advanced in common for hastening the execution of the canal. By October, 1865, it is understood that the portion of the canal between Vitry and St. Dizier might be made available. In the Moselle group

the activity noted is sustained, and the rise effected some days since has been entirely accepted by purchasers. English pig has been abandoned on the St. Dizier market, in consequence of its dearth. Notwithstanding some reductions which have recently taken place in it, its cost price is still 4l. 10s. 9d. to 4l. 11s. 6d. per ton, a rate which is quite out of the question when the mixed pig of the district, of a quality superior to that of Cleveland, can be obtained at 4l. 4s. per ton, while charcoal-made St. Dizier pig stands at nearly the same point as the coke-made products of England. One establishment, the Cismortier Works, has resumed the fabrication of pig for casting purposes, which it had been obliged to suspend in consequence of the competition of Scotch pig. The Cismortier works have just sold a lot at 5l. 16s. for No. 1, a price which testifies in favour of the quality of the article when Garscherie No. 1 is worth 4l. 18s. in the French ports of the Channel, or 5l. 8s. 9d. at St. Dizier.

A report by M. Muller, consul of Belgium, at Stettin, contains the following paragraph, with reference to the iron trade of Prussia:—"The importation of rough iron into Prussia amounted, in 1863, to 80,000 tons, and exceeded by 3750 tons the imports of 1862; of worked pig the imports were 9500 tons, instead of 8600 tons in the preceding year. As a general rule, affairs in metals acquired a great development in Prussia in 1863. Merchants and manufacturers using iron complain, however, that independently of the import duty established with a view to the protection of native industry—a favourite phrase in England, by-the-by, 15 or 20 years since—the latter is also favoured by differential railway tariffs. Thus, the rate charged for iron in general is 3½d. per quintal per German mile—the German miles are precisely long ones—while it is only 1d. for iron proceeding from the mines and ironworks of Silesia. All complaints with a view to the suppression of this grievance have proved fruitless."

At Havre, a fall in Chilean copper has made further progress. According to the circular of a broker, this fall results principally from numerous deliveries from the Southern Seas, and important offers made on the spot by England. Speculation which has confidence in the future profits from this situation, and makes numerous purchases. Thus, during the past week 145 tons, then 85 tons, and finally 25 tons, have been successfully dealt in at 88l.; the last reports announce—vaguely, it is true—that some transactions have been concluded at 87l., but we learn that they are limited to a lot of 5 tons. A lot of 50 tons, to be delivered in the second fortnight of August, subsequently changed hands at 88l. It is not probable that prices will descend below this point, the more recent advices from Chili being a little firmer, and announcing an almost complete absence of freights, as well as the bad season, which checks the works of mines. In United States copper the transactions concluded at Havre during a great development in Prussia in 1863. Merchants and manufacturers using iron complain, however, that independently of the import duty established with a view to the protection of native industry—a favourite phrase in England, by-the-by, 15 or 20 years since—the latter is also favoured by differential railway tariffs. Thus, the rate charged for iron in general is 3½d. per quintal per German mile—the German miles are precisely long ones—while it is only 1d. for iron proceeding from the mines and ironworks of Silesia. All complaints with a view to the suppression of this grievance have proved fruitless."

The Austrian Crédit Mobilier has just resumed the working of the salt mines in Hungary. To this step, as well as to the adoption of new statutes, is attributed a rise which has lately been established in the stock of the Crédit. To group together one or two other items of miscellaneous information, we may add that the Société de la Nouvelle-Montagne is paying a dividend of 12. 5s. per share, and 8s. per fifth share. The dividend of the Nord de Charleroi Collieries Company for 1863 has been fixed at 1l. per share, half payable June 30 and half Dec. 31. The dividend of the Rieberg-Ex-Monten Mines and Foundries Company, for 1863, has been fixed at 5l. 4s. per share. The Royal Asturian Mining Company (Spain) will pay 5s. 10d. per share on July 1, as the dividend for 1863. The Société Nouvelle des Forges et Chantiers de la Méditerranée is also paying 2l. 16s. per share, the balance of the dividend for 1863. The annual meetings are announced of the Collieries Zinc, Collieries, &c. Company, the Courcelles-Nord Colliery Company, &c.

REPORT FROM NORTHUMBERLAND AND DURHAM.

JUNE 16.—The Coal and other staple trades of the district continue good; the prices of iron are, however, rather drooping, and the stocks of pigs still continue to increase. At the meeting of the Tyne Commissioners, on Thursday last, the long-vested question of the sea-docks, near the mouth of the Tyne, may be considered to have been finally settled. The mode in which the money is to be raised and guaranteed by the coalowners, railway proprietors, and others, was clearly pointed out by the Chairman, Mr. Cowen; and all the difficulties in the way, which at one time appeared to be insuperable, now seem to be satisfactorily disposed of. The sum required to complete the docks, according to the Parliamentary plan of Mr. Ure, is 350,000l., and it is understood that this plan will be adhered to, as the depth of water on the Bar is rapidly increasing, consequent on the formation of the piers, and other dredging operations. The formation of those docks will give accommodation to the largest vessels afloat, and the Tyne will, consequently, be vastly raised on the scale as a seaport. It was finally settled at the meeting referred to, the members of the commission being nearly unanimous on the subject, that the foundation stone of the new docks be laid on the 23d of the present month, and the erection of the south wall of the dock will be immediately proceeded with. Great rejoicings are expected to take place at North Shields on the day when the interesting ceremony takes place.

Now that there is a prospect of real service being performed by a Coal-Cutting Machine, it is, perhaps, only natural that a dispute should arise as to the authorship of the successful machine. Various machines have been tried for the purpose of working coal, extending over a period of, we believe, nearly 80 years. The first account we have of a machine of this kind in the northern district is a sort of tradition of an "iron man," the invention of Willie Brown, a mining engineer, who flourished about that period—that is, 80 years back. But this, like many other attempts, was doomed to failure. A machine of this kind was also invented about eight or ten years ago, by Mr. Johnston, a Newcastle engineer, and this machine possessed great merit, but it also, after a pretty long trial, mainly at the Broomhill Colliery, was laid aside.

The invention of Messrs. Ridley and Co. is, without doubt, the first machine of the kind which has proved of real practical utility. It has, indeed, in every respect the look of a machine calculated to perform real work, as the pick is used in exactly a similar manner to the mode adopted by a man in working, while the force and rapidity it possesses can only be limited by the powers of steam, which, of course, must far exceed the muscular power of a man. The only real obstacle to its introduction, indeed, appears to be—Firstly, the use of long-wall working in hard coal seams, so as to get a good face for the working of the machine; and, secondly, the conveyance of the motive-power (compressed air) in pipes to the point where the machine is required. The great extent of some coal mines will, perhaps, render the second objection a serious one in some cases, but we cannot suppose in the majority of cases that any insuperable difficulty will be met with. The first objection can easily be removed by changing the mode of working. Many coal-cutting machines tried formerly—the majority, indeed, we believe—were constructed on the principle of saws or cutters, some being circular saws, and others differently constructed, but all intended to saw or cut the coal in a similar manner to the mode adopted in cutting wood. All machines on this principle have, we believe, failed, and will in future fail.

The machine of Messrs. Ridley and Co. proceeds on a different principle, and, we believe, a correct one; and it will, there is no doubt, ultimately succeed to a very great extent. Should the pipes be laid into the workings of a colliery for the purpose of working this machine, it is considered by some that the motive-power could also be applied with great effect for another purpose—in order to drive tunnels or drifts through hard stratum



and botany. He concluded amidst marks of approval from the members.—A few fossils, the property of Mr. G. Dearden, and from the "green sand" were laid on the table. Amongst these was a nautilus, a species of one of the few genera that have representatives in the modern seas, and which have lived on through the long vista of geologic time and come down to our own day.—A vote of thanks was cordially awarded to Mr. Wild for his valuable paper.—*Oldham Chronicle*.

KAPUNDA MINING COMPANY.

The fifth annual general meeting of shareholders will be held on Monday. The following is an abstract of the working account for the year 1863, as certified by the auditors (Messrs. John Noble and J. R. Harris):—

Received for sundries in the colony.....	£ 264 0 6
Profit for 20 cwt. 0 gr. 10 lbs. copper, sold in the colony.....	95 8 0
Profit for 20 cwt. 0 gr. 10 lbs. copper, sold in England.....	£51,126 13 11
Profit for 500 tons 10 cwt. 1 gr. 7 lbs. sold in England.....	£1,133 15 11
Less discount on sales.....	511 5 0
Less brokerage on sales.....	2,045 0 11
Less estimated value of copper unsold of that shipped to England, prior to Dec. 31, 1863—see <i>Consolidated</i> , 31 tons, 3 qrs. 10 lbs. (say), at 92l. per ton net (say), 3000l. ; ex <i>Murray</i> 120 tons 3 cwt. 2 qrs. 13 lbs. (say), at 92l. per ton net (say), 11,600l. ;	14,160 0 0
Estimated value of stock remaining on hand in the colony, as per manager's account of December 31, 1863.....	£2,700 0 0
Copper at Port Adelaide, 50 tons, at 90l. per ton.....	4,500 0 0
Copper in requis and ingot moulds, 11 tons, at 85l.	935 0 0
Copper in requis and ingot moulds, 62 tons, at 75l.	4,650 0 0
Copper in cobbles, fowl flags, and furnace bottoms, 41 tons, at 75l.	3,000 0 0
Copper in December, ores not then weighed and sampled, but since ascertained to be equal to 49 tons, at 75l.	3,675 0 0
Fuel in store, estimated by the manager at.....	2,000 0 0
Hay stock and forage.....	120 0 0
Timber, deals, &c., in excess.....	100 0 0
Total.....	£81,181 1 11

Balance of stock as per last year's account.....	£19,400 0 0
Expended in the colony during the year 1863.....	£49,317 19 7
Due for tribute on ore raised in December, the same having been paid in January, 1864.....	1,149 14 0
Interest paid in the colony.....	1,117 2 9
Interest paid in England.....	87 4 3
Insurance on copper.....	1,248 9 9
Freight on copper.....	541 13 6
Dock charges on copper.....	226 14 8
Stores, being the amount in stock Jan. 1, 1863, now written off.....	95 19 4
Office expenses, being for rent of office.....	£110 0 0
Stationery, printing, &c., hire of rooms for meetings, petty cash, &c.....	53 9 3
Director's allowance.....	600 0 0
Auditor's allowance.....	42 0 0
Secretary's salary.....	350 0 0
Clerk's salary.....	90 13 4
Balance, being the estimated profit on working for the year 1863.....	6,880 1 0
Total.....	£81,181 1 11

The total quantity of ore raised during 1863 amounted to 3516 tons, of 17½ per cent. average produce, equivalent to about 622 tons of pure copper (this confirming the favourable estimate expressed at the last half-yearly meeting of the increased productiveness of the mine as compared with the previous year, 605 tons were made at the smelting works; 573 tons were shipped to this country. This general improvement accounts for a corresponding increase in the working cost of the mine: the total amount for 1863, £5,901, 0s. 4d., exceeds the last year's total by £1,828, 19s. 8d., of which sum £967, 15s. attaches to the main items of smelting and tributors' wages. The average net price for the copper sold since the last general meeting has been 93l. 15s. per ton, about 5l. per ton above the average of the two previous seasons. Strong hopes were entertained during the past winter of a continuance of high prices; a reaction, however, took place in the month of February, which from political and commercial causes still exists; the effect of this, in the necessarily reduced valuation of the stock of copper, ore, &c., in the year's working account, lessens seriously the balance to profit. That, nevertheless, in the opinion of the board, fairly satisfactory, amounting to £887, 1s. 7d., and justifying the directors in recommending the payment of a dividend of 1s. per share, free of income tax. With reference to the allusions made at the half-yearly meeting to the manager's letter, in September last, on the working condition of the mine, the board have since received his completed report for the six months ending December, based on his personal inspection, and uniformly favourable. The ore, as was then stated, had been raised mainly from the upper levels, as the lodes in the 60 and 70 had not at the date of the advertisement sufficiently developed for very extensive tributor operations. The manager was consequently unable to report any decided feature of price, or otherwise, in respect of these levels. It will be remarked that in pursuance of the course proposed by the board, two years ago, a further annual sum of 1000l. has been placed against the profit and loss account, reducing the amount last standing under the head of permanent works to the sum of 2000l. The directors take this occasion of expressing their deep regret at the loss sustained by the board during the early part of the present year, by the death of their respected colleague, Mr. William Routh, and of recording their high sense of the great value of his lengthened business experience and unvarying solicitude for the interests of the company. They have not deemed it necessary to fill up the vacancy occasioned by this lamented event, and they recommend the meeting to sanction this arrangement.

In the South Australian (Burra Burra) Mining Association annual report the directors state that the productiveness of the Burra Burra Mines, although not quite equal to the yield of former times, is, nevertheless, very considerable, particularly when the number of years that many of the pits have been worked is taken into consideration. The returns annexed to the report show that during the six months ended March 31 the quantity of ore raised was 3952 tons, which is estimated to produce on an average 22½ per cent. of pure copper. The financial statements included in the report show, in the first place, what was the position of the association on Sept. 30, 1863. During the six months which ended on that date the quantity of ore raised was 4131 tons, at a cost of £1,748, 19s. 4d., or 10s. 2d. per ton. The produce thus realised was £5,700, 16s. 2d., or 13l. 9s. 8d. per ton; and yielded a profit of £3,956, 16s. 8d., or 3l. 7s. 7d. per ton, the total profit being within a few hundred pounds equal to the amount estimated by the directors in their last report. These results, it is said, bear favourable comparison in every particular with those of the previous half-year. The gross profits which were derived from these operations, ended on Sept. 30 last, amounted to 14,759, 11s. 5d., which included 800l. for rents and 215s. for fees. Out of this 12,520l. was appropriated to the payment of the fifty-third dividend on March 2, and there remained a balance of 2777, 18s. 5d. at the credit of the profit and loss account. To this balance must now be added the estimated profits upon the ore raised during the past six months, which, estimated amount being 15,388, 1s. 10d., will make the total balance 18,167, 0s. 3d. Out of this the next and fifty-fourth dividend will have to be paid. The estimate as to the profit likely to be realised on the produce of the past half-year is, of course, based on the present state of the copper market. The report says:—"When the directors last met the shareholders they had the pleasure of informing them of an advance in the price of copper; they have now to advise a continued upward rate, Burra Burra copper being quoted in London in February last at 116l. per ton; and as there are 380 tons on the way to the London market, it is anticipated that a good result will be obtained." At the Burra Burra the quantity of ore raised in the last six months was 1130 tons; whilst in reference to the Karkulito Mine we learn that the pits are looking promising, and that the ore on the mine at the date of the report was copper 6 tons, and iron 10 tons. The company's establishment on March 31 was as follows:—At the Burra Burra Mines: Tributors, 236; workmen, 60; owner's account and tributors, 57; total miners, 343; ore dressers, 82; boys, 25; total ore dressers, 107; mechanics, 5; variously employed, 19; labourers, 34; whin and cart boys, 29; officers, 10; total at the Burra Burra, 583.—At Karkulito Mine: Tributors, 11; workmen, 6; total miners, 17; whinboy, 1; storekeeper, 1; total at Karkulito, 19.—At the Adelaide Office: Officers, 4; gross total, 606. The wages paid at the present time are—Miners, 30s. to 50s. per week; engine-drivers, 40s. to 60s.; mechanics, 40s. to 60s.; labourers, 27s. to 30s.; youths, 18s. to 24s.; boys, 8s. to 10s. The foregoing particulars show that the present report is a highly satisfactory one. The gross profits on the half-year's operations are put down at 15,388, 1s. 10d., whilst the profit of the previous half-year was 14,759, 11s. 5d., an encouraging result is obtained after paying as much as 10s. 2d. for the raising of ore of which is produced. The price obtained for it, as shown by the report, is 13l. 9s. 8d., and the shareholders receive out of this the sum of 3l. 7s. 7d. The remaining 10s. 2d. goes in the payment of wages and other working expenses. It will be seen from this how productive the mine must still be in order to pay the good dividends which the shareholders receive. We hope that the same results may be obtained for many years to come. At the annual meeting the only other business which was transacted besides the adoption of the report was the election of directors for the ensuing year. The retiring directors were Messrs. Kingston, Jaffrey, Beck, Peacock, and Graves; and they were all re-elected.

ROSEDALE MINES AND FERRYHILL IRONWORKS.—We associate these important enterprises under the same head, because we have good reasons for stating that the terms of an amalgamation are already agreed upon between their respective proprietors; and as the occurrence of such an event, in this line of mining industry, cannot but be regarded with a certain degree of interest, we think that a brief descriptive outline of each establishment will prove to our readers an acceptable adjunct to the announcement of their union. The Vale of Rosedale is situated on the south side of the range of the Cleveland hills, running in a southern direction towards Pickering, and gives its name to the ironstone, the seams of which crop out to the grass on the eastern and western side of the valley for a long distance. The ore on the western side is worked partly in open quarry, and partly by drifting into the side of the hill; and the produce is conveyed to the vast smelting furnaces on the banks of the Tees, and to the Ferryhill system, on the Cleveland range, 12 miles in length, of the North Eastern Railway system, on the Cleveland range, and joins the North Cleveland line near Ingleby. The ore is for the most part highly magnetic, and of a richness varying from 35 to 47 per cent. of metallic iron in its natural or raw state; and the seam on the western side varies from 6 to 60 ft. in thickness; but on the eastern side it is proved, for a distance of about two miles, to be of nearly a uniform thickness of 15 ft. These mines are, or were, the property of Messrs. Leeman, Sheriff, and Harries, who, to facilitate their development, are actively engaged in constructing a locomotive railway to the eastern outcrop, which will be completed in the course of next year, when it is confidently anticipated that, under the new proprietary, the eastern and western Rosedale Mines together will supply no less than 1,000,000 tons of ironstone per annum to the increased and increasing blast-furnaces of North Yorkshire and the county of Durham. The Ferryhill works are, or were, the sole property of our spirited townsman, Mr. James Morrison; and they consist of three furnaces now in blast, with blast-engine, and all necessary adjuncts, and of four additional ones nearly completed, with the best modern appliances, of which not the least important will be a pair of powerful blowing-engines of the most approved construction, from Lillieshall, in Shropshire, about 250 horse-power each; and as these are calculated to give ample force of blast for six furnaces, it is intended to erect two additional ones immediately after the four, on the eve of completion, are fully at work. Of these four furnaces, it may be interesting to our readers if we remark in passing, that they are sup-

posed to be the largest in dimensions of any yet constructed, being, as we are informed, no less than 80 ft. in height, by 21 ft. in the largest interior diameter. Besides these, and as forming part of the plant of the works, there are about 500 coke-ovens in full work, with their appurtenances of coal-purifying apparatus, railroads, and plant, together with lime and brickworks on a large scale. When the Ferryhill Works are in full operation, it is supposed that the produce of iron will not be less than 150,000 tons per annum; and consequently the consumption of Rosedale ironstone, for this make alone, will exceed 300,000 tons annually. These brief particulars, we hope, will be sufficient to enable a pretty correct estimate to be formed of the nature and extent of this united and spirited enterprise; and for ourselves, on personal as well as on public grounds, we heartily wish every success to the Rosedale and Ferryhill Iron Company.—*Newcastle Daily Chronicle*.

ENGLISH COAL IN AMERICA.—The 1000 tons of South Levenson gas coal contributed by Mr. George Elliott, of London, the freight upon which was paid by Mr. James McHenry, of London, arrived at this port last week, by the ship *Gibraltar*, from Sunderland. The coal was sold at auction by Messrs. E. H. Ludlow and Co., at the Merchants' Exchange, on May 24. There was a fair attendance of bidders, and the coal was started at 810, and was run up to 815-50, at which price it was knocked down to the Manhattan Gas Company, of New York. Mr. Cyrus W. Field stated at the sale that this coal is considered in London as the best gas coal in the world, and that at the present rates of freight, exchange, &c., it could not be landed here for less than 814-22 per ton. The freight on this cargo alone was 1000l. sterling.—*American Coal Trade Review*.

SOUTH WHEAL FRANCES, AND WEST WHEAL BASSET.

EXCHEQUER CHAMBER, JUNE 16.
(Sittings in Error. Present—Lord Chief Justice Erle, and Justices Williams and Willes, and Chief Baron Pollock, and Barons Bramwell, Channel, and Pigott.)

LYLE v. RICHARDS AND OTHERS.—This was the case of the long-protracted dispute between the West Basset and South Frances Mines, in Cornwall, as to the south boundary of the former mine, which became the north boundary of the latter, the question being whether the line of boundary should be drawn from the north corner of "John Vincent's house," as contended for by South Frances, or from the south corner of the house, as contended for by West Basset. This action is the West Basset action against South Frances, and it will be remembered that there was a previous action, of Reynolds v. Buckley, brought by South Frances against West Basset.

In Reynolds v. Buckley the South Frances party obtained the verdict at the trial, and the judgments of the Courts of Queen's Bench and Exchequer Chamber in their favour, the West Basset party abandoning their threatened appeal to the House of Lords; and the South Frances adventurers accordingly obtained their damages and costs at that action. In Lyle v. Richards the West Basset adventurers obtained a verdict in their favour, the learned judge who tried the cause reserving leave, however, to South Frances to set aside that verdict, which he said he was dissatisfied, and expressing his opinion that if it were a question of law (as he thought it was) West Basset had failed to make out their case. South Frances accordingly obtained a rule from the Court of Queen's Bench, in which the action was brought, granting them a new trial, at all events, in case the Court of Error, to which they referred the questions of law, should not decide in their favour upon the law. This was the rule which came on for argument on Thursday before the above-named learned judges, and which occupied their attention nearly the whole day. Mr. MONTAGUE SMITH, Q.C. (with whom was Mr. KARLKE, Q.C.), appeared for South Frances, who were the appellants in this Court, and argued that the facts as to the locality having been found, the question became one of law for the Court upon the construction of the documents.

The SOLICITOR-GENERAL (Sir R. P. Collier), with whom were Mr. Coleridge, Q.C., and Mr. Henry Ballad, appeared for the respondents (West Basset), and argued that the jury were the proper parties to decide upon the case; but that if it were for the Court, there was an ambiguity which would let in the rule of law that the grant must be taken most strongly against the grantor. The Court, however, thought otherwise, and in favour of South Frances, which it is to be hoped will put an end to this tedious and expensive litigation, and that the two mines will henceforth proceed on principles of amity and good feeling one towards the other, for the best interests of their respective shareholders. It appears that both mines inadvertently worked beyond their proper boundary, even though they succeeded for the line for which they respectively contended; and South Frances paid into Court 825l. for the ore taken beyond the line from the northeast corner of the house, and which has now been determined by the Court of Exchequer Chamber; and the sufficiency of this sum will be the subject of arbitration by some independent mining agent.

The judgment, which was then given in favour of South Wheal Frances, will appear in *extenso* in next week's Journal.

Mr. JERU HITCHINS, of whose numerous extensive inspections in various parts of the world we have often had to give notice, we understand is again about to leave England for Greece, to visit some islands in the Archipelago, to report on the sulphur and lead mines said to exist and to promise great riches. On his route Mr. Hitchins touches at Marseilles, Genoa, Naples, Messina, in Sicily, and Athens.

OKEL TROT.—An influential authority has recently inspected this property, and his report thereon is of the most encouraging character. It concludes by stating—"I believe that I have before expressed to you a favourable opinion of this mine, and I am glad to have this opportunity of again expressing myself in much stronger terms, by saying that I never saw the mine look so well as at present, and as soon as the points which I referred to are accomplished, with a continuation of the present appearance, nothing can prevent the mine from giving a good profit, and dividends to the adventurers."

BRITISH ZINC ROLLING COMPANY (Limited).—The creditors are required to send the particulars of their claims to the official liquidator by July 5—the 12th having been appointed by the Master of the Rolls for adjudicating upon them.

SCHOOL SHIP.—THE THAMES MARINE OFFICERS' TRAINING SHIP "WORCESTER," moored off Erith, is managed by a committee of London shipowners, merchants, and capitalists.

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TO CAPITALISTS.—WANTED, a PARTNER, with from £5000 to £10,000, in a FIRST-CLASS COLLIERY in NORTH WALES. A colliery proprietor or mining engineer preferred, but not essential.—Address, "W. 15," Post-office, Liverpool.

TO IRON MANUFACTURERS.—A PARTY in GLASGOW, who has an extensive connection, and who could influence a large trade with Clyde shipbuilders, DESIRES a FIRST-CLASS AGENCY for ANGLE and T-IRON, SHIP and BOILER PLATES, and SHEET IRON, or for any of these singly.—Address "M. C. A." care of Messrs. Anderson and Watt, 64, Buchanan-street, Glasgow.

TO INVENTORS AND PATENTEES.—A GENTLEMAN having an extensive connection with manufacturers, merchants, and others, would be GLAD to UNDERTAKE the SALE of INVENTIONS or PATENTED ARTICLES, on commission.—Apply to Mr. HAWKES, patent office, 14, Clare-street, Bristol. N.B.—Continental and foreign agencies solicited.

ON SALE, a FIRST-CLASS NEW HORIZONTAL STEAM ENGINE, has 12 in. cylinder, 2 ft. stroke, with strong link motion to valve for reversing. Very suitable for a winding engine. Price, £75. Also, one same size, with governor complete. Price, £75. Other sizes proportionately low.—Apply to ISAAC W. BOUTON, Ashton-under-Lyne.

ON SALE, a LEAD MINE, BUILDINGS, MACHINERY, PLANT, &c., situated in NORTH WALES. Owing to some of the proprietors wishing to realise will be sold at a great sacrifice. Good ore has been got.—Full particulars on application to "Y. Z." care of Mr. Henry Greenwood, advertising agent, Liverpool.

FOR SALE, a CURRENT GOING COLLIERY AND BRICK WORKS, in a large manufacturing town, doing a considerable trade, and capable of great extension. The connection and profits are good. There are also about TWELVE ACRES of FREEHOLD LAND and SEVENTEEN COTTAGES close to the works, which (with the greater part of the coal) are freehold, will be sold with the colliery.—Enquire of Mr. M. W. T. Scott, mine surveyor, 34, Great George-street, Westminster.

FOR SALE, 19½ in. FORCING PUMP, 14 in. LIFTING PUMP, HAND PUMPS, pumping crank, lifting screw, pit chain, and other colliery material.—Apply to Mr. JOHN FARKER, Nailsea, near Bristol.

FOR SALE, the RIGHT to the PATENT of a VALUABLE IMPROVEMENT in VALVES and BUCKETS for PUMPS, and in VALVES or COCKS for OTHER USES.—For particulars, apply to Mr. W. T. RAWLE, patent and mining agent, 39, Budge-street, Bristol.

HORIZONTAL ENGINES FOR SALE, at very low prices:—One 12 in. cylinder, 24 in. stroke; one 12 in. cylinder, 36 in. stroke; and two 14 in. cylinders, 36 in. stroke. All ready for delivery, and may be had with or without fly-wheels.—Apply to Messrs. E. PAGE and Co., Laurence Pountney-place, Laurence Pountney-hill, Cannon-street, E.C.

STEAM ENGINE.—WANTED, a 60 in. PUMPING ENGINE, with TWO 10 in. BOILERS.—Particulars, with price, to be addressed to Mr. EDWARD KING, 37, Austinfrs, London, E.C.

MONEY.—CONTRACTORS AND OTHERS can be ACCOMMODATED with LOANS, DISCOUNTS, &c.—Apply to Messrs. WILKINSON and Co., monetary negotiators and arbitrators, &c., 26, Birch-lane, Cornhill, London, E.C.

India Office.

BY ORDER OF THE SECRETARY OF STATE FOR INDIA
IN COUNCIL, notice is hereby given that the DIRECTOR-GENERAL OF STORES FOR INDIA will be READY, on or before MONDAY, the 27th instant, to RECEIVE PROPOSALS in writing, sealed up, from such persons as may be willing to supply—

ONE HUNDRED TONS OF CAKE COFFER.
And that the conditions of the said contract may be had on application at the India Store Office, Cannon-row, Westminster, where the proposals are to be left any time before Two o'clock P.M. of the said 27th day of June, 1864, after which hour no tender will be received.
GERALD C. TALBOT, Director-General.

India Office, June 16, 1864.

Tenders for Steam Coal.

SOUTH-EASTERN RAILWAY—CONTRACT FOR
HARD STEAM COAL.—The Directors of the South-Eastern Railway Company are PREPARED to RECEIVE TENDERS for the SUPPLY of TEN THOUSAND TONS of HARD STEAM COAL, suitable for locomotive purposes, to be delivered in trucks on to the company's line at Reading.

Tenders to be sent in on or before Wednesday, the 22d June inst., endorsed "Tender for Coal," addressed to the undersigned.
London Bridge Terminus, June 16, 1864.

TO MINE OWNERS AND OTHERS.—THE UNDERSIGNED INVITES TENDERS for the PURCHASE, in one lot, of the MINING MACHINERY AND IMPLEMENTS, and OTHER EFFECTS, of the CRAIGTON MINES COMPANY (LIMITED), upon and about the CRAIGTON MINE, at NEWTON STEWART, N.B., where the same may be seen on application to Samuel McDowall, the man in charge. The property is in good working order and condition, and consists of FOUR large and small WATER and OTHER WHEELS, pumps, with rods, buckets, &c., complete; horse gin, with drawing chain, pulleys, crab winch, balance bob, barrows, double crushing mill, with drawing machine attached; chat mill; 4 iron jiggling sieves, 6 head stamping mill, jiggling tubs, sieves, and all necessary and usual appendages for ore and slime washing; 2 pairs bellows, anvil, vice, and other tools; 2 carpenter's benches, with tools; grindstone, 12 underground wagons, about 7 or 8 tons of iron rails, and a large quantity of iron pipes and iron, and of wood rails and timber; large beam and scales, with weights, and sundry useful patterns; office furniture and other effects.

The property to be taken with all faults (if any), and to be at the sole risk of the purchaser after payment of his purchase-money, and to be removed by and at his expense immediately thereafter.

Tenders to be forwarded to the undersigned, at his office, 62, Moorgate-street, London, by the 24th instant; but the undersigned does not bind himself to accept the lowest or any tender.

London, June 11, 1864.

TO COAL PROPRIETORS.—TO BE LET OR SOLD, the WHOLE of the COAL UNDER the RED HUGH ESTATE, near NEWCASTLE, being about TWO HUNDRED ACRES in EXTENT.—Apply to Mr. JOHN CONWAY, miner, Rabbit Bank, near Gateshead; or Mr. BENTLEY, Kendal.

FLUOR-SPAR DELIVERED AT MATLOCK STATION at TEN SHILLINGS PER TON.—Apply to Mr. WILLIAM SPERRY, Matlock, Derbyshire.

SPIEGELEISEN.—SPECULAR IRON, of the VERY BEST QUALITY, £7 10s. PUDDLED STEEL, in ∇ bars, £11 10s., f.o.b. at Hall. Samples on application.
JULIUS GOLDSTEIN, Hamburg.

TO BE LET, for a term of 21 years, a VALUABLE MINERAL PROPERTY, situated at the foot of the far-famed Parys Mountain, AMLWCH, ANGLESEY.—For particulars, apply to the proprietor, Mr. GEO. R. HUGHES, Llanelly Mawr; or to Mr. JAMES M. WILLIAMS, Assay Master to the Mona Mine Proprietors. Amlwch, Anglesey, North Wales, June 6, 1864.

CARYSFORT MINING COMPANY (LIMITED).—Notice is hereby given, that the ORDINARY HALF-YEARLY MEETING of the Carysfort Mining Company (Limited) will be HELD on MONDAY, the 4th day of July, 1864, at the hour of Twelve o'clock noon, at the office of the company, No. 65, Dame-street, Dublin, for the purpose of submitting the directors' report and statement of accounts for the half-year ended the 30th of April last; for the election of the directors for the half-year ending the 30th of April next; and for the transaction of the other ordinary business of the company, and one auditor; and for the transaction of the other ordinary business of the company.
By order, W. R. FAYLE, Sec.
65, Dame-street, Dublin, June 16, 1864.

C O L O N I A L B A N K.

Subscribed capital.....£2,000,000
Paid-up capital.....500,000

The Court of Directors of the Colonial Bank hereby give notice that, in pursuance of the provisions of the Charter, a HALF-YEARLY GENERAL MEETING of the proprietors will be HELD on WEDNESDAY, the 6th day of July, 1864, at the London Tavern, Bishopsgate-street, at Two o'clock precisely, to receive the report of the proceedings of the Corporation, and for the election of a director in the room of Thomas Henry Munn, Esq., deceased; and of an auditor in the room of Alexander Macgregor, Esq., resigned. Alexander Macgregor, Esq., offers himself as a candidate for the vacant directorship, and Jacob Quixano Henriques, Esq., offers himself as a candidate for the vacant auditorship. Proprietors are requested to take notice of the following provisions of the Charter, namely:—

1.—Every proprietor intending to become a candidate, or to propose some other proprietor as a candidate, for the vacant office of director or auditor, must, within ten days from the date hereof, signify by some writing under his or her hand, to be left within the same ten days at this office, either his own intention to become a candidate, or the name and place of abode of the candidate intended to be proposed by him or her.
2.—A list of candidates, with the names of the proprietors (if any) by whom they are proposed, will be exhibited in this office 14 days prior to the date of election.
3.—No proprietor will be entitled to vote at this meeting unless his name or name shall have been registered at least three calendar months prior to the date of election.

The transfer books of the Corporation will be closed on the 27th inst., and re-opened on the 15th July, 1864.
By order of the Court of Directors,
15, Bishopsgate-street, June 6, 1864. C. A. CALVERT, Sec.

SWANSEA COPPER ORE WHARVES,

Swansea, January 1, 1864.
GENTLEMEN.—We beg to inform you that, in consequence of the retirement of Messrs. W. and J. M. Williams from the copper ore trade, which they have carried on here for so many years past, we have resolved to enter upon that business, and for which purpose we have secured most eligible wharves, on the west side of the North Float, where vessels drawing 20 ft. of water can get alongside at all times. These wharves are now being covered in, and together with a steam crusher now erecting, will, we expect, be completed in two or three weeks from this date.

The business we propose carrying on is that of copper ore wharffingers, combined with metal and other general agencies, which will be managed by our Mr. Thomas Elford, who for 29 years has filled an important situation under Messrs. Williams, Foster, and Co., and for the last eight years has had the entire management of their large copper smelting works, and copper and metal rolling mills, in this locality, as well as the copper ore business of Messrs. W. and J. M. Williams, which we trust will be a sufficient guarantee to our friends that any business they may entrust to our care will be conducted with the most scrupulous attention to secure the best results for their interests.

Soliciting a share of your consignments of ore, regains, and slab copper to this port, as well as a share of any general business you may have to transact in this quarter, we remain, Gentlemen, your obedient servants.

ELFORD, WILLIAMS, AND CO.
REFERENCES:—Messrs. Williams, Foster, and Co., London and Liverpool; Messrs. Williams, Harvey, and Co., London and Liverpool; the Glamorganshire Banking Company, Swansea; Messrs. Alex. Bell and Sons, No. 8, Finch-lane, London.

CAPT. C. WILLIAMS has FOR SALE FIFTY SHARES in the HAVAN MINE at 70s. per share, and SIXTY SHARES in the CWM-SYMOLOG UNITED, at 40s. per share, both free of commission. Mr. Williams has also a FIRST-CLASS LEAD AND COPPER MINE TO DISPOSE OF, full particulars of which will be given upon application being made.
Tyn-y-Wern, Tallesin, Shrewsbury, June 8, 1864.

CARDIGANSHIRE MINING OFFICES.

MESSRS. WILLIAMS, BRAY, AND CO. beg to inform their mining friends and the public generally that, in consequence of the numerous applications and requests they have received, they now UNDERTAKE the INSPECTING AND REPORTING on MINES.

The several members of the firm having had many years' experience in mining in all its branches is the best guarantee of their ability in such matters; and they trust that, by carefully examining the mines they visit, and faithfully reporting thereon, and by constantly watching the progress of both old and new undertakings, they will be able to supply a want that has been greatly felt in the district, and give every information and advice that may be required.

OFFICES, 44, MARINE TERRACE, ABERYSTWTH.

MINING OFFICES, 25, PRINCESS STREET, MANCHESTER.

LEIGH, MOLYNEUX, AND CO., MINE AGENTS AND SHAREBROKERS, BUY AND SELL SHARES OF EVERY DESCRIPTION, on commission or for net cash.
Office of the Hazell Grove Silver-Lead Mining Company (Limited), JAMES LEIGH, secretary.

MR. THOMAS CARTHEW, MINING OFFICES, 17A, SISE LANE, BUCKLESBURY, LONDON, E.C.
Reliable information respecting mining generally can be obtained by applying as above. Bankers: Roberts, Lubbock, and Co., 15, Lombard-street, London.

MR. D. STICKLAND, M.E., having had upwards of 40 years' mining experience in Cornwall, several years of which he has had the entire management of mines therein, enables him to GIVE GOOD ADVICE thereon. MINES INSPECTED and faithfully REPORTED ON. DEALER in MINING, RAILWAY, and OTHER SHARES.

His monthly "Circular" for April contains a selected list of Cornish and other mines. Forwarded on receipt of six postage stamps.
38, Dowgate-hill Chambers, London, E.C.

BRITISH AND FOREIGN STOCK, SHARE, AND MINING OFFICES, No. 2, WINCHESTER BUILDINGS, GREAT WINCHESTER STREET, LONDON, E.C.

Messrs. FULLER and CO. continue to BUY and SELL EVERY DESCRIPTION of SHARES in BANKS, CANALS, MINES, RAILWAYS, and GOVERNMENT STOCK, either for money or account. Stock Exchange business effected upon the usual commission.

Telegraphic messages promptly attended to, and every information supplied, either personally or by letter. Office hours, from Ten to Four o'clock.
Bankers: The Metropolitan and Provincial Cornhill.

CHARLES DAVEY AND CO., SAFETY FUSE MANUFACTURERS, ST. HELEN'S JUNCTION, LANCAIRES.

NORTH WHEAL SETON COPPER MINING COMPANY

(LIMITED).
Capital £25,000, in 1000 shares of £25 each.
Deposit, £2 10s. per share.CHAIRMAN—J. T. FENTON, Esq., Stapleton House, Leeds, Colliery Owner.
BANKERS—Messrs. Beckitt and Co., Leeds.
SECRETARY—G. Simpson, Esq., Albion-street, Leeds.
MANAGER—C. and C. Thomas, Redruth, Cornwall.

This company is for the purpose of working the North Seton Mine, which is situated at Camborne, in Cornwall, the richest district in Europe for copper, and to the west of the celebrated Seton and Tolgus Mines, which have realised immense profits. The West Seton Mine alone having returned in one year £49,000, and still being one of the richest mines in the district.

Shafts have been sunk in this set, and three promising lodes discovered, two of them from 4 ft. to 5 ft. wide, and the other from 7 ft. to 8 ft. wide.

Applications for shares and prospectuses to be made to Mr. GEORGE SIMPSON, 55, Albion-street, Leeds.

EAST WHEAL FLORENCE, CALLINGTON, CORNWALL.

At a MEETING of the adventurers, held at the residence of Mr. Henry Trefaith Smith, Morice square, Devonport, on the 30th May, 1864, it was resolved:—That the mine be divided into 6000 shares, of which 4000 at least be considered the property of the original adventurers, and that the remaining portion be offered to the public at £2 per share.

The adventurers have great confidence in calling the attention of those interested in mining operations to the accompanying reports, which they have received from practical men, who have been requested to state their opinions as to the prospects which East Wheel Florence offers to those who may feel disposed to take a share in opening up so valuable a district.

REPORTS.

March 10, 1864.—By your request I have inspected the above mine, and beg to hand you my report thereon. I presume there is no necessity for me to enter into detail respecting the length and breadth of this mineral property, but content myself by saying that this set is situated in the parish of Callington, in a good mining district, and is very extensive, especially in the direction of the lodes which have been discovered, traversing the set, being upwards of 500 fms. in length on the course of them. There has been already two large and very promising lodes (and there is no doubt there are several others within the set) discovered—viz., the Wheel Tonkin and the Wheel Florence lodes, only one of which (the Wheel Florence lode) has yet been wrought on by the present company. On this lode a shaft has been sunk to a depth of 12 fms. from the surface, on a lode varying in size from 5 to 6 ft. wide, with an underlie south of about 1 ft. in a fathom; this lode is composed of iron pyrites (mundle), quartz, and black and yellow copper ore, of excellent quality, producing of the latter from 2 to 4 tons per fm. in many places in the course of sinking the shaft, which is confirmed by the piles of ore now on the surface, and in course of dressing. The lode now standing in the ends of the shaft will, no doubt, pay for taking away, and leave a good profit to the adventurers. To the south of the Wheel Florence lode an adit was commenced and driven in a northerly direction about 40 fms. (and intersected the before-named lode about 13 fms. west of the shaft), through a beautiful stratum of clay-slate, and intersecting in its course several branches of quartz, containing portions of yellow copper ore, dipping north towards the lode, and will, no doubt, prove good auxiliaries to it in depth. From this point of intersection of the lode by the adit a level has been driven east by the side of the lode, and communicated with the shaft; the lode has been cut into in several places, and shown unmistakable indications of there being found a good productive lode when taken down, especially near the shaft, which the men have now commenced doing. About 7 or 8 fathoms north of the Wheel Florence lode is the Wheel Tonkin lode, which is also a large and promising lode where seen at the surface, and can be intersected by the continuation of the adit level further north, at a comparatively small expense, the ground being easy for driving. When this is accomplished you will be better able to judge both of the quality and underlie of the lode, and whether the lodes are converging towards each other in depth or not, and thereby ascertain if the present shaft should be converted into an engine-shaft, for the development of the two lodes, or if a shaft should be placed in another position for that purpose. I would also recommend the driving east of a level on the course of the Wheel Florence lode, in the adit level, for the further development of the lode, and the taking off the surface water at that level, besides the opening up some ore ground in that direction. I would also advise the sinking of your present shaft as deep as practicable for water, as a trial shaft, on the lode; and if, in the course of deepening it, it is found to continue productive, and also to be in its proper place, then at once erect the necessary machinery, and push it down as quick as possible; for from the present appearance of the lodes, where already wrought on, there can be scarce a doubt but that at a reasonable depth you will have a good and lasting dividend-paying mine.

N. SECUMBE.

Camborne, May 10, 1864.—In pursuance of your request, I have carefully inspected the above mine and set, and have the pleasure to hand you my report. The set is situated in the rising ground to the north-east, and close to the town of Callington; it is extensive, being upwards of 500 fathoms in length on the course of the lodes, and about 400 fms. in breadth. It includes Wheel Tonkin in the eastern ground, and adjoins the well-known Redruth Mines to the west. The stratum is clay-slate, and no great distance from the granite to the north. Three known lodes traverse the set for its entire length, two of which have been intersected 12 fms. below the surface, by a cross-cut adit of 40 fms., and about 220 fms. from the western boundary. Knowing's lode is the most southerly yet seen; it has been opened on by level 15 fms. east of the adit cross-cut. In this driving the lode has varied from 2 to 3 feet in width, with an underlie of 15 in. per fm. south; it is composed of quartz, chlorite, mundle, and at intervals bunches of rich yellow copper ore. Knowing's shaft is sunk 12 fms. below the surface, and communicated with the adit 2 fms. behind the end; the lode in this shaft is from 2 to 3 ft. wide, much of the same character as in the level, also yielding bunches of copper ore. About 4 fms. west of Knowing's shaft the back of the level is working by two men at 10s. in 17. tribute. Smith's lode is intersected 5½ fms. north of Knowing's, and developed by level 9 fms. west of the adit cross-cut. In this driving the lode is 4 ft. wide, and underlies 1 ft. per fm. south; it is composed of mundle, chlorite, and pryan, with occasional stones of yellow copper ore; this lode carries a good flooken on the south side, is well defined, and of a very promising character. The rising ground which these lodes traverse ranges east, consequently they will take back in that direction, and in the eastern ground 20 fms. of backs or more may be obtained above the adit level. They vary a few degrees in their bearings, and will form a junction about 50 fms. to the east of Knowing's shaft. This is a very important point to see, and would recommend a vigorous prosecution of the adit on each of these lodes in that direction, while they continue so strong and promising; but should either of the lodes fall off in appearance, I would only drive the adit on the most promising to the junction, which is more central, and probably the best position for the engine-shaft. At all events, the exploration of these lodes at the adit will clearly define the subsequent course you ought to pursue. In conclusion, looking at the small extent of ground opened on these lodes, and the quantity and quality of ore sampled (20 tons), I am inclined to think that pretty much copper ore will be raised above the adit level, and I beg to add that I have scarcely ever seen a set which offers greater inducements for the investment of capital.

WILLIAM PASCOE.

East Wheel Russell, May 19, 1864.—I have this day carefully inspected the above mine, and beg to hand you my report thereon. The set is situated on the south-west side of Kit Hill, in the parish of Callington, in the county of Cornwall, and is upwards of 600 fms. east and west on the line of the lodes, and about 400 fms. from north to south, and the stratum in which the lodes are embedded is a light blue clay-slate. Close to the granite range an adit level has been driven north about 40 fms., and intersected two lodes, which are about 200 fms. east of the western boundary. The south lode (Knowing's) being opened on by a level about 17 fms. east, varying in size from 1½ to 4 feet in width, composed of capel, quartz, peach, pryan, mundle, black oxide, grey and yellow sulphate of copper ore, and underlying south about 1 ft. in a fathom, and the present end (east) presenting a promising appearance. From the present bearing of the lode, an improvement may be fairly expected. When this level is extended east about 70 or 80 fms. no doubt a junction of the lodes will take place. The lode has been opened on to the west of the adit about 3 fms., the bottom of the level producing a little rich yellow copper ore in places, the lode in the end being small; but as the hill drops fast in this direction there cannot be much chance of an improvement in this direction at so shallow a depth; therefore, I would recommend the suspension of the driving in that direction before sinking deeper. Knowing's shaft has been sunk 12 fms. below surface, and communicated to the adit level, and also sunk a few feet below the adit. The lode in the shaft from surface to adit varies in size from 4 to 4½ ft. wide, of a strong character, and produces copper ore in places. There is a tribute pit working in the back of the adit, by two men at 10s. in 17. The adit level has been driven north 3 or 4 fms. from the south lode, and intersected Smith's lode, which has been opened on about 7 fms.; the lode in the end is from 3½ to 4 ft. wide, composed of capel, quartz, pryan, peach, mundle, and copper ore, and is decidedly of a healthy character; the stratum in which the lodes are embedded is soft clay-slate, and the underlie south about 1½ ft. in a fathom. The south lode underlying less, there is every reason to believe that in about 40 or 50 fms. the two lodes will form a junction in depth. As the driving is extended eastward on this north lode, I am of opinion that it will be found on the back. By present appearances, these lodes will produce large quantities of copper ore at a shallow depth. It is well known that the best mineral-bearing strata being close on the junction of the granite and kilaas, and the mines in the north produced large quantities of copper ore.

JOHN GOLDSWORTHY.

Applications for shares to be made on or before the 30th June, to the purser, Mr. R. E. KNOWLING, Morice-square, Devonport.

IRON TRADE CIRCULAR (RYLAND).—An opinion has been

for some time past prevalent in the iron trade, that it is desirable to institute a medium for communicating information of importance which might be depended upon as an unbiased authority. To this intent I have myself been frequently applied to by influential parties in the iron trade, who expressed a strong desire that I should undertake the issuing of such a Circular, as they considered a Circular coming from me would carry with it sufficient authority; while my known position in the trade would operate as a guarantee against undue bias in any statements therein contained. I had declined up to the present time taking upon myself a duty so onerous, but have been induced to change that resolution by the growing conviction on all sides that some such Circular has become an absolute necessity for protecting the public, as well as the trade, by the publication of facts, and facts only. Acting under this impression, and assured of sufficient support from many quarters, I have consented to undertake the issue and independent superintendence of the "IRON TRADE CIRCULAR," which will be published at the offices of C. Ryland and Sons, and the "IRON TRADE CIRCULAR" office, at Birmingham, on Saturday, the 25th inst.

To this Circular the name of my firm will be appended; indeed, it will be generally known in the trade as "Ryland's Circular," and for the statements therein made, so far as trade matters are concerned, I shall hold myself responsible equally as if I were giving advice by word of mouth to my clients.

The "IRON TRADE CIRCULAR" will be eminently the business journal of the mining districts. Its information will be in all cases dependable, trustworthy, authentic, unbiased, and complete, comprising, as it will, not only the business news of the South Staffordshire district, but generally of the entire mining districts of the kingdom. Arrangements have been already effected for communications from official sources, of all matters, monetary and political, likely to influence prices. A combination of foreign and home telegraphic communications (already arranged for) will enable me to furnish information up to the latest possible moment.

The Money Market Intelligence of the "IRON TRADE CIRCULAR" will be from the highest authority.

A portion of the paper will be regularly set aside for announcements or advertisements of matters of interest to the trade, as sales of mines, minerals, property, plant, contracts for works, &c.

For the purposes of the "IRON TRADE CIRCULAR," an office will be opened in Birmingham. The Circular will be transmitted, post free, to all annual subscribers of two guineas, payable (10s. 6d. quarterly) in advance.

I shall be obliged by any information of trade interest being directed during the ensuing week to my offices, The Mount, Handsworth, Birmingham.

The Mount, Handsworth, June 16, 1864. CHARLES RYLAND.

In Chancery.

PURSUANT to a Decree of the High Court of Chancery, made in the matter of the ESTATE of JAMES HOLLOW, late of the parish of UNY LELANT, HAYLE, in the county of CORNWALL, mine agent, deceased, and in a cause between Richard Hallett, Charles Robert Essex, and Alfred Richards, plaintiffs, and Thomas Hollow, defendant, the CREDITORS of the above-named James Hollow, deceased, are, by their solicitors, at the chambers of the Vice-Chancellor, Sir Richard Torin Kinderley, No. 3, Stone-buildings, Lincoln's Inn, Middlesex, or in default thereof they will be peremptorily excluded from the benefit of the said Decree.

Tuesday, the 12th day of July, 1864, at Twelve of the clock at noon, at the said chambers, is appointed for hearing and adjudicating upon the claims.

J. A. BUCKLEY, Chief Clerk.
DOUGLAS PLUCKNETT HINDLEY,
10, Old Jewry Chambers, E.C.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN RE CARN CAMBORNE MINE.
TO BE SOLD, pursuant to an Order made in a Cause Harding v. Daniell and Another, dated the 11th day of March last, BY PUBLIC AUCTION, at the Registrar's Office, Truro, on Wednesday, the 29th day of June inst., 20 (6000ths) SHARES of the defendant William Thomas Daniell, Of and in the said MINE. JOSEPH ROBERTS, Truro.
(Agent for R. W. Childs, Plaintiff's Solicitor, 25, Coleman-street, London).
Dated Registrar's Office, Truro, June 16, 1864.

SALE OF DESIRABLE FREEHOLD FARMS, and a VALUABLE SLATE VEIN, in the parishes of TRAWSFYNDD and MAENTWROG, MERIONETHSHIRE.

MR. W. DEW WILL SELL, BY AUCTION, at the Oakley Arms Hotel, Tanybwlch, on Thursday, the 7th day of July, 1864, at Twelve o'clock at noon (unless previously disposed of by private contract, of which due notice will be given), subject to conditions to be then and there produced, in three lots, all these TWO FREEHOLD FARMS, called COED CAE DU and HENDRE MUR, now in the occupation of Ellis Humphreys and Ann Evans, as tenants from year to year, situate in the above parishes, containing FOUR HUNDRED AND SEVENTY FIVE ACRES or thereabouts of ARABLE and PASTURE LAND, together with extensive rights of common appertaining thereto on Maentwrog Mountain.

These farms are conveniently situated on each side of the main road leading from Tanybwlch and Festinog to Trawsfynydd and Dolgelly, distant four miles from Tanybwlch, six miles from Festinog, one mile from Trawsfynydd village, and thirteen from Dolgelly, and are well worth the attention of capitalists, being in the centre of a large tract of mineral country, and near the auriferous district.

An extensive slate vein exists upon Ffriddgloch part of Coed Cae Du, and trials have been newly opened on part of it, the prospects of which are considered unexceptionable, being a continuation of the Branch Dda Vein, which is now being extensively worked by a wealthy company, within a few hundred yards of the property.

A tack-note has been granted to a party from the present owner, to commence from the 1st day of May last, for one year, containing the usual covenants and agreements for a lease of 21 years, at a dead rent of £10 per annum, merging into a royalty of 1-12th, and this farm, or such part of it as is included in the tack-note, will be sold subject to the same.

The contemplated line of railway from Dolgelly to the Festinog Slate Quarries, and thence on to Portmadoc and Porthynllan, will have to pass very near, if not through, one or other of these farms. The farm of Coed Cae Du is capable of great improvement, and its present value may be very greatly enhanced at a small expense.

The property affords good partridge and hare shooting. The respective tenants will show the farms.

Further particulars and plans may be had on application to the auctioneer, British Hotel, Bangor; or to Mr. O. OWEN, solicitor, Beaumaris.

GOUROCK COPPER MINE FOR SALE.

The above mine is within one mile of a shipping port on the Clyde, where the ore can be shipped to market. There has been expended on the mine by the late proprietors nearly £2000. They have sent to Swansea 59 tons copper ore, which has produced upwards of £300. The mine has been wrought open east, and as far as seen the ore seems to be continuous. There is a lode of copper ore about 10 ft. thick, containing from 2 to 3 per cent. of copper, and a lode at bottom 2 ft. thick, containing over 25 per cent. There has been erected a 25-feet water-wheel, also two jiggers and one buddie, besides quarrying utensils and necessary buildings. The ore is easily wrought, and by a small outlay water may be had to crush and dress from 40 to 50 tons per day. The whole to be sold in one lot, and offers to be made by the 1st July. Further particulars may be learned by addressing Liquidators of the Gourock Copper Mine, care of Mr. F. Dunlop, 2, Church-place, Greenock.

THE HYDRAULIC TUBE DRAWING AND STEEL

ORDNANCE COMPANY (LIMITED).
Incorporated under the Companies Act, 1862, by which the liability of shareholders is strictly limited to the amount of their shares.

Capital £150,000, in 15,000 shares of £10 each. First issue 7500 shares.
Deposit £1 on application, and £1 on allotment.
Subsequent calls not to exceed £1 per share, and at intervals of not less than three months; but not more than £5 per share in all will be called up unless by consent of a general meeting.

TEMPORARY OFFICES—160, GRESHAM HOUSE, OLD BROAD STREET.

ABRIDGED PROSPECTUS.

This company is formed for the purpose of purchasing and developing certain new and valuable patents for improvements in the drawing and shaping of metals, and for the machinery employed therein. By this process metal tubes can be produced from the fineness of a needle to the size required for the largest ordnance, and its products may be applied to numberless other uses, with infinitely increased strength and diminished cost.

The patents, in order to afford those interested a means of testing the commercial value of their mode of manufacture, have erected a powerful hydraulic draw bench, of 600 tons pressure, at temporary works in London, 67, Willow-walk, Bermondsey, where it has been seen in operation, in consequence of which applications have been received for licences and machinery, and from these sources alone a large annual income cannot fail to be derived.

Samples of the manufacture can be seen at the company's offices, and cards to view the machine in operation can be obtained on application to the secretary.

Further particulars are given in the detailed prospectus.

Applications for shares must be made either to the secretary or to the brokers of the company.

THE HYDRAULIC TUBE DRAWING AND STEEL

ORDNANCE COMPANY (LIMITED).—Notice is hereby given, that the SHARE LIST of the above company will be CLOSED on SATURDAY, the 26th inst., for LONDON, and on MONDAY, the 27th inst., for the COUNTRY.

By order, A. PLATT, Sec.

Temporary offices, No. 160, Gresham House, Old Broad-street, E.C., June 16, 1864.

THE GREAT NORTH VOR TIN AND COPPER MINING

COMPANY (LIMITED).
To be incorporated under the Joint-Stock Companies Act, 1862, by which the liability of shareholders is strictly limited to the amount of their respective subscriptions.

Capital £25,000, in 5000 shares of £5 each.
Deposit £1 per share on application, and £1 on allotment.

DIRECTORS.

JOSEPH ATWELL, Esq., 72, Bedford-gardens, Kensington (Chairman of the Deal and James Pier Company).
WALTER BANKS, Esq., Broxbourne (Director of the Tamar and Callington Railway).
MOFFATT C. W. HORNE, Esq., 29, Guildford-street, Russell-square.
General MASON, South Parade, Trafalgar-square, Brompton.

JOSEPH NIGHTINGALE, Esq., 150, Leadenhall-street, E.C.
Lieutenant-Colonel TODD, Springfield-road, St. John's-wood.

BANKERS—The Alliance Bank (Limited), Lombard-street.
BROKERS—Messrs. Aarls and Co., 41, Lombard-street.

By order, G. BEDFORD, Esq.

OFFICES.—11, ST. BENET'S PLACE, GRACECHURCH STREET.

PROSPECTUS.

This company is formed for purchasing and working the mines formerly known as the Leadtown Consols and Polgase, with several contiguous lodes, now all included under the name of Great North Vor. The property will be held under a lease of 21 years, at the low royalty of about 1-18th, and is located in the midst of the Breage and Crowan Mines, which in the aggregate have made returns of about 2,000,000. The mines in this district have sold the richest ores of copper and tin known in Cornwall, and considering the comparatively shallow depth yet attained in most of the mines, the produce in quality and quantity of the ores of metals raised is remarkable. The only two deep mines in the district are the Wheal Abraham and Great Wheal Vor lodes.

The Great North Vor Mine is situated between Hayle and Camborne, and is within two miles of the main line of railway. The old Godolphin Mine adjoins the set in the west, Great Wheal Vor lying to the south, while the celebrated Crenver and Abraham is on the east. Each of these mines has, as is well known, returned immense quantities of ore. A provisional agreement has been entered into for the purchase of the leases of this property for £2500 in cash and £3000 in shares fully paid up.

Reports from miners who have been familiar with the district from their youth are furnished, from which it will be evident that this is a very valuable property, and may be looked on as a sound investment.

In the event of no allotment being made, all deposits will be returned in full.

STATEMENT OF PROFITS REALISED BY THE MINES ADJACENT TO THE PROPERTY OF THE GREAT NORTH VOR COMPANY.

East Treasury—First working	£ 90,000	Godolphin	£116,000
" Second working	80,000	Julia	300,000
Crowder	73,000	Strawberry	120,000
West Treasury	6,000	Relistian—Last working	10,000
Wheal Sarah	85,000	Wheal Janeey	30,000
Blinner Downs, above the 4th	80,000	Tremayne—Present working	2,000
Abraham—Second working	36,000	North Blinner Downs	25,000
" First working	250,000	Great Wheal Vor—Last working	500,000
Carzise	20,000	Wheal Metal	60,000
Wheal Mary	12,000	Great Fortune—Present working	12,000
Wheal Mount	50,000		

Full prospectuses, with forms of application for shares, can be obtained from the brokers, Messrs. Aarls and Co., 41, Lombard-street; or the secretary, at the offices of the company, where specimens from the lodes, and plans and sections of the property, may be seen.

THE GREAT NORTH VOR TIN AND COPPER MINING

COMPANY (LIMITED).
Notice is hereby given that, in consequence of the numerous applications for shares in this company, the directors have appointed TUESDAY, the 28th day of June, as the LAST DAY for RECEIVING APPLICATIONS. All allotments will be made according to priority of application.

By order, G. BEDFORD, Sec.

11, St. Benet's-place, Gracechurch-street.

Tavistock Ironworks, Devon.—(Established 1804.)

GILL AND CO., ENGINEERS AND IRONFOUNDERS.
MANUFACTURERS OF STEAM ENGINES AND BOILERS. CHAINS OF ALL DIMENSIONS. STEELED SHOVELS to any pattern. EVERY DESCRIPTION OF CAST AND HAMMERED IRON for MINING, MANUFACTURING, and AGRICULTURAL PURPOSES.

HAMMER MILLS. EDGE TOOL MANUFACTORY.
FOREIGN MINES SUPPLIED ON LIBERAL TERMS.
VARIOUS DESCRIPTIONS OF SECOND-HAND MACHINERY CONSTANTLY ON HAND.
N.B.—AGENTS for TANGY'S PATENT HYDRAULIC LIFTING JACK, and WESTON'S PATENT DIFFERENTIAL PULLEY BLOCKS.

CLAYTON, SHUTTLEWORTH, AND CO.,

ENGINEERS.
MANUFACTURERS OF PORTABLE AND FIXED STEAM ENGINES, MACHINERY FOR PUMPING, HOISTING, GRINDING, SAWING, &c. ENGINEERS FOR STEAM CULTIVATION, SELF MOVING ENGINES FOR COMMON ROADS and AGRICULTURAL PURPOSES GENERALLY.

STAMP END WORKS, LINCOLN; and
78, LOMBARD STREET, LONDON.

ALSO AT
LOWENGASSE No. 44, LANDSTRASSE, VIENNA, and GEGENBURGER STRASSE, SAARBRÜCK, FENST.

Descriptive, illustrated, and priced catalogues free per post.
SPECIAL DRAWINGS WHEN REQUIRED.

THE BEST STEAM THRASHING MACHINERY MADE.

Exhibition Medal, 1862.

WEIGHING MACHINERY,

CONSISTING OF
PLATFORM WEIGHING MACHINES and HIND'S PATENT RAIL and ROAD WEIGHBRIDGES, overhead TRAVELLING WEIGHING CRANES and CRANES, RAILWAY WEIGHING TURNABLES, &c.

Of the WALL, PILLAR, PORTABLE, or TRAVELLING KINDS; and CRANES and WINCHES for STEAM or HAND POWER, &c. Also, TURNABLES, WATER COLUMNS, TANKS, and PUMPING MACHINERY, and GENERAL RAILWAY PLANT, manufactured by

RICHARD KITCHIN, ENGINEER AND IRONFOUNDER,
SCOTLAND BANK IRONWORKS, WARRINGTON.

Prize Medal Awarded Great Exhibition, 1851, and International Exhibition, 1862.

PATENT SAFETY FUZE WORKS, TUCKINGMILL,

CORNWALL.—We beg respectfully to inform the public that since the death of the late Mr. THOMAS DAVEY this firm has consisted of JOHN SOLOMON BICKFORD, GEORGE SMITH, FRANCIS PRYOR, SIMON DAVEY, and WILLIAM BICKFORD SMITH. It is requested that all letters may be addressed, and all cheques and drafts made payable to us, as BICKFORD, SMITH, AND CO.

THE UNITY PATENT SAFETY FUZE COMPANY

SCORRIER, CORNWALL, SOLICITORS FOR THE DIFFERENT KINDS OF SAFETY FUZE which they are PREPARED TO SUPPLY, of SUPERIOR QUALITY, and of ANY LENGTH.

Gun Cotton Manufactory.

MESSRS. THOMAS PRENTICE AND CO.,

GREAT EASTERN CHEMICAL WORKS, STOWMARKET, SUFFOLK.

This manufactory has been established for the purpose of preparing GUN COTTON, according to the Austrian process, and was opened on the 26th of January last, under the inspection of Baron Lenk. Messrs. Thomas Prentice and Co. are now able to SUPPLY GUN COTTON, in its most approved form, either for the purposes of engineering and mining, or for military and submarine explosion, and for the service of artillery, as a substitute for gunpowder.

The advantages of Baron Lenk's GUN COTTON are the following:—

FOR PURPOSES OF ARTILLERY.—The same initial velocity of the projectile can be obtained by a charge of gun cotton one-fourth of the weight of gunpowder. There is no smoke from the explosion of gun cotton; it does not foul the gun, nor heat it to the injurious degree of gunpowder. There is much smaller recoil of the gun. The same initial velocity of projectile is produced, with a shorter length of barrel. In projectiles of the nature of explosive shells it breaks the shell more equally into much more numerous pieces than gunpowder. When used in shells, one-third the weight of gun cotton produces double the explosive force of gunpowder.

FOR CIVIL ENGINEERING AND MINING.—In driving tunnels through hard rock a charge of gun cotton of given size exerts double the explosive force of gunpowder, thus a smaller number of holes is necessary. It may be so used as, in its explosion, to reduce the rock to much smaller pieces than gunpowder, and so facilitate its removal. As gun cotton produces no smoke, the work can proceed much more rapidly, and with less injury to the health of the miners. In working coal mines the advantages of bringing down much larger quantities of material with a given charge, and the absence of smoke in the explosion, enable a much greater quantity of work to be done in a given time at a given cost. The weight of gun cotton required to produce a given effect in mining is only one-sixth part of the weight of gunpowder. In blasting rock under water the wider range and greater force of a given charge is a great element in cheapening the cost of submarine work.

The peculiar local action of gun cotton, to which the effects of gunpowder show no analogy, enables the engineer to destroy and remove submarine stones and reefs, without the preliminary delay and expense of boring chambers for the charge.

FOR MILITARY ENGINEERING.—The facility of transport is increased, the weight of gun cotton being one-sixth that of gunpowder. The peculiar local action of gun cotton facilitates the destruction of bridges and palisades, and every obstacle. For submarine explosion, gun cotton has the advantage of a much wider range of destructive power than gunpowder. For the same purpose gun cotton, from its lightness, has the advantage of keeping afloat the water-tight case in which it is contained, while gunpowder sinks it to the bottom.

FOR NAVAL WARFARE.—In the batteries of ships, between decks, and in casemated forts, the absence of smoke facilitates continuous rapid firing. The absence of fouling and of heating are equally advantageous for naval as for military artillery.

GENERAL ADVANTAGES.—Time, damp, and exposure do not alter the qualities of the patent gun cotton. It has already been preserved 10 years without injury or decay. It can be transported through fire without danger, simply by being wetted, and when dried in the open air it becomes as good as before. In the case of a ship, or a fortress, or a city being on fire, this quality may be of the greatest value. It is much safer than gunpowder, owing to its being manufactured in the shape of rope or yarn. It cannot escape from its package, or be spilled by accident. The patent gun cotton is entirely free from the danger of spontaneous combustion, and secures that degree of safety and certainty which, at the time of the original invention, the gun cotton of Schönbeld did not possess.

Messrs. THOMAS PRENTICE and Co. are now in a position to contract with the owners of mines, engineers, contractors, and governments for gun cotton prepared in the various forms required for their use. Mining charges will be supplied in the rope form, according to the diameters of bore required, and gun cotton match-line, as well as instructions for using it in mines, will be supplied with it.

The great advantage of gun cotton make its use in practice very much cheaper than its comparative price would appear to show; in blasting rock, for example, the rapidity and quantity of the work done, with a given expense of wages, &c., is largely in favour of gun cotton.

Messrs. THOMAS PRENTICE and Co. are also prepared to manufacture the gun cotton, and deliver it in the form of gun cartridges, adapted to every description of ammunition; all they require for this purpose being a drawing of the gun, gunpowder cartridges, and ammunition, with the specification of weights, sizes, and initial velocities.

Artillerists who prefer to manufacture their own cartridges may make special arrangements with the patentees through Messrs. PRENTICE and Co.

Stowmarket, March 10, 1864.

BASTIER'S PATENT CHAIN PUMP,

APPARATUS FOR RAISING WATER ECONOMICALLY, ESPECIALLY APPLICABLE TO ALL KINDS OF MINES, DRAINAGE, WELLS, MARINE, FIRE, &c.

J. U. BASTIER begs to call the attention of proprietors of mines, engineers, architects, armers, and the public in general, to his new pump, the cheapest and most efficient ever introduced to public notice. The principle of this new pump is simple and effective, and its action is so arranged that accidental breakage is impossible. It occupies less space than any other kind of pump in use, does not interfere with the working of the shaft, and unites lightness with a degree of durability almost imperishable. By means of this hydraulic machine water can be raised economically from wells of any depth, it may be worked either by steam-engine or any other motive power, by quick or slow motion. The following statement presents some of the results obtained by this hydraulic machine, as daily demonstrated by use:—

1.—It utilises from 90 to 92 per cent. of the motive power.
2.—Its price and expense of installation is 75 per cent. less than the usual pumps employed for mining purposes.
3.—It occupies a very small space.
4.—It raises water from any depth with the same facility and economy.
5.—It raises with the water, and without the slightest injury to the apparatus, mud, wood, stone, and every object of a smaller diameter than its tube.
6.—It is easily removed, and requires no cleaning or attention.

A mining pump can be seen daily at work, at Wheal Concord Mine, South Devon, Devon, near Tavistock; and a shipping pump at Woodside Graving Dock Company (Limited), Birkenhead, near Liverpool.

J. U. BASTIER, sole manufacturer, will CONTRACT to ERECT his PATENT PUMP at HIS OWN EXPENSE, and will GUARANTEE IT FOR ONE

ESTABLISHED 1800.

EDGE AND SON,

MANUFACTURERS OF
IMPROVED FLAT and ROUND CHAINS and WIRE ROPES,
FOR MINING PURPOSES.
BOULDS, KIBBLES, IRON BLOCKS, and BLOCK CHAINS,
RAILWAY COUPLINGS, HORSE TRACES, CRANE CHAINS,
USES, and FORGINGS.
MANUFACTORY, COALPORT, SHROPSHIRE.

Prize Medal Awarded Great Exhibition, 1851, for
Mining Chains.

Prize Medals—International Exhibition, Class 1 and 2.

PATENT PLUMBAGO CRUCIBLES.

The CRUCIBLES manufactured by the PATENT PLUMBAGO CRUCIBLE COMPANY are the ONLY KIND for which a MEDAL has been AWARDED, and are now used exclusively by the English, Australian, and Indian Mints; the French, Russian, and other Continental Mints; the Royal Arsenal of Woolwich, Bristol, and Toulon, &c.; and have been adopted by most of the large ENGINEERS, BRASSFOUNDERS, and REFINERS in this country and abroad. The GREAT SUPERIORITY of these melting pots consists in their capability of melting on an average 40 pourings of the most difficult metals, and a still greater number of those of an ordinary character, some of them having actually reached the EXTRAORDINARY NUMBER of 96 meltings. They are unaffected by change of temperature, never crack, and become heated much more rapidly than any other crucibles. In consequence of their great durability, the saving of waste is also very considerable.

The company have recently introduced CRUCIBLES SPECIALLY ADAPTED for the following purposes, viz.:—MALLEABLE IRON MELTING, the average working of which has proved to be about seven days; STEEL MELTING, which are found to be nearly 1½ ton of fuel to every ton of steel fused; and for ZINC MELTING, lasting much longer than the ordinary iron pots, and saving the great loss which arises from mixture with iron.

For lists, testimonials, &c., apply to the Patent Plumbago Crucible Company, Battersea Works, London, S.W.

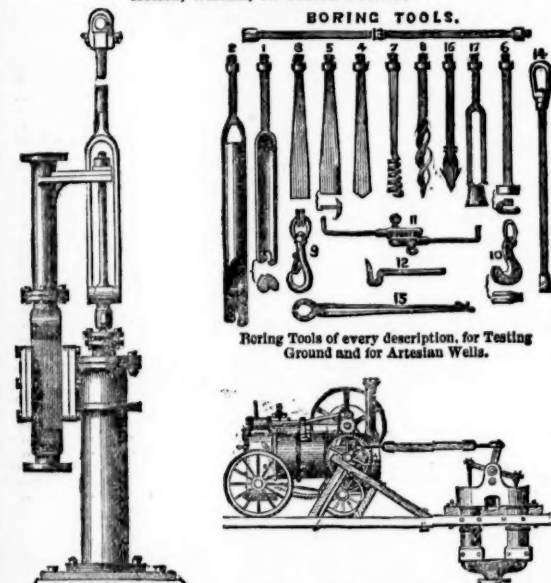
Fully described in the MINING JOURNAL of July 5.

TESTIMONIAL JUST RECEIVED.

Queen's Cross Foundry, Dudley, June 10, 1864.—We have much pleasure in giving our testimony to the great superiority of your crucibles. We have constantly used them for the last four years, and find that we can melt with one of the 100 lb. crucibles from 35 to 40 cwts. of our steel mixture for bearings, which we consider tries the pots much more than the ordinary brass or gun metal. There is also a very considerable saving in fuel and time, as we now make one furnace do the same work two formerly did with the clay pots. There is also much less waste from oxidation, in consequence of the metal being so quickly melted. After having tried many kinds, we have no hesitation whatever in pronouncing them to be the best and most economical crucibles that can be used, and so long as the quality is as good as it has hitherto been we shall on no account think of using any others.

We are, Sirs, faithfully yours, W. WESTLEY AND SON.

CLINTON AND OWENS (LATE B. FOWLER AND CO.),
WHITEFRIARS STREET, FLEET STREET, LONDON, E.C.,
HYDRAULIC and GENERAL ENGINEERS,
MANUFACTURERS OF PUMPS OF EVERY DESCRIPTION FOR HAND,
HORSE, WATER, OR STEAM POWER.



Boring Tools of every description, for Testing
Ground and for Artesian Wells.

Portable Engines with Double Barrel, or other
Pumps, on Hire or Purchase.

Improved Double-action Pumps.
Full information, Drawings, Price Lists, &c., relating to the above, and to Hydraulic Machinery of all descriptions—Crabs, Pulleys, Blocks, and Hoisting Tackle of superior manufacture—may be had on application.

MESSRS. W. EASSIE AND CO.,
RAILWAY SAW MILLS, MOULDING SHOPS, &c., AND
GENERAL TIMBER CONVERTING YARDS,
HIGH ORCHARD, GLOUCESTER.

Are PREPARED TO FURNISH QUOTATIONS for any description of WOOD FITTINGS for houses or foreign RAILWAY STATIONS, BARRACKS, EXHIBITIONS, DWELLINGS, WAREHOUSES, FACTORIES, STORES, GLASS HOUSES, &c. They will also CONTRACT for WOODEN FITTINGS of ANY KIND in CONNECTION with IRON BUILDINGS, &c. The above would in all cases be designed ready fitted, so as to ensure speedy re-erection. Numerous drawings of works of the above nature, already executed, can be seen on application, and references permitted to the engineers thereof.



The above Firm supply Barrows, Carts, Wagons, temporary Huts, permanent Shedding, and every description of Mines and Contractors' Tools, at the very lowest prices. References can be given where many thousands of the above have been supplied to different parts of the world. Prices quoted on application. Delivered to any station, or home or foreign port.

ASSAYS AND ANALYSES UNDERTAKEN at MODERATE CHARGES, by MR. ARTHUR EVANS, LECTURER ON CHEMISTRY, NORMAL COLLEGE, SWANSEA.—Papers to be directed Mr. A. EVANS, 12, High-street, Swansea.

THE BANKING, MINING, AND JOINT-STOCK COMPANIES REVIEW,
A JOURNAL OF COMMERCE, TRADE AND MANUFACTURE,
SCIENCE AND THE ARTS.

Published every Wednesday. Subscription, £1 ls. annually. Price 6d. stamped.

RAILWAYS AND MINES.

Capitalists who seek safe and profitable investments, free from risk, should act only upon the soundest information. The market prices for the day are for the most part governed by the immediate supply and demand, and the operations of speculators, without reference to the *long* side of the property. Railways depend upon the traffic, expenditure, and capital accounts, the probabilities of alliance or competition with neighbouring companies, the creation of new shares, the state of the money market as affecting the renewal of debentures, and other considerations founded on data to which those only can have access who give special attention to the subject. Mines afford a wider range for profit than any other public securities. The best are free from debt, have large reserves, and pay dividends of monthly varying from £15 to £25 per cent. per annum. Instances frequently occur of young mines rising in value 400 or 500 per cent. But this class of security, more than any other, should be purchased only upon the most reliable information. The undersigned devote special attention to railways and mines, afford every information to capitalists, and effect purchases and sales upon the best possible terms. Thirty years' experience in mining pursuits justifies us in offering our advice to the uninitiated in selecting mines for investment; we will, therefore, forward, upon receipt of Post-office orders for 5s., the names of six dividend and six progressive companies that will, in our opinion, well repay capitalists for money employed.

Messrs. TREDNICK AND CO., STOCK AND SHAREBROKERS, and DEALERS in BRITISH MINING SHARES, 78, LOMBARD STREET, E.C.

THE NEWCASTLE CHRONICLE AND NORTHERN COUNTIES ADVERTISER. (ESTABLISHED 1764).
Published every Saturday, price 5d., or quarterly 2s. 3d.
Offices, 42, Grey-street, Newcastle-upon-Tyne; 50, Howard-street, North Shields; 195, High-street, Sunderland.

READ THE NEW MEDICAL GUIDE, written by a Physician, for the Self Care of Nervousness, Indigestion, Loss of Memory, Dimness of Sight, Laetudine, &c. This work is illustrated with hundreds of cases and testimonials from patients, showing the treatment by which they were cured. Free by post to any address, on receipt of a stamped directed envelope.—Address to Messrs. SMITH, 8, Burton-crescent, Tavistock-square London, W.C.

NICHOLLS, WILLIAMS, AND CO., ENGINEERS,

BEDFORD IRONWORKS, TAVISTOCK.
MANUFACTURERS OF STEAM ENGINES OF EVERY DESCRIPTION, made on the BEST and NEWEST PRINCIPLES. We beg more especially to call the attention of the public to the manufacture of our BOILERS, which have been tested by most of our leading engineers. PUMP WORK CASTINGS OF EVERY DESCRIPTION, both of brass and iron. HAMMERED IRON and HEAVY SHAFTS of ANY SIZE. CHAINS made of the best iron, and warranted. RAILWAY WORK OF EVERY DESCRIPTION.
ALL ORDERS FOR ABROAD RECEIVE THEIR BEST ATTENTION. NICHOLLS, WILLIAMS, AND CO. have had 20 years' experience in supplying machinery to foreign mines, and selecting experienced workmen to erect the same, where required. Messrs. NICHOLLS, WILLIAMS, AND CO. have always a LARGE STOCK of SECOND-HAND MINE MATERIALS in stock, and at moderate prices.

MESSRS. W. DERRY AND CO., MINING MATERIAL MERCHANTS, ST. AUUSTELL, respectfully inform the mining public that they have constantly ON SALE EVERY DESCRIPTION of MINING PLANT, in PITWORK, DRESSING APPLIANCES, &c., and STEAM ENGINES, as follows:—
ONE 50 in. cylinder PUMPING. ONE 25 in. ditto ROTARY.
ONE 45 in. ditto ditto TWO 25 in. ditto ditto
ONE 40 in. ditto ditto ONE 20 in. ditto PUMPING.
ONE 30 in. ditto ditto
ONE 19 horse power PORTABLE HIGH PRESSURE ENGINE.

Applications to be addressed as above, or to the engineer of the company, Mr. W. H. GRAY, St. Austell.

RAILWAY CARRIAGE COMPANY (LIMITED)

ESTABLISHED 1847.
OLDBURY WORKS, NEAR BIRMINGHAM.
MANUFACTURERS OF RAILWAY CARRIAGES and WAGONS, and EVERY DESCRIPTION of IRONWORK.
Passenger carriages and wagons built, either for cash or for payment over a period of years.
RAILWAY WAGONS FOR HIRE.
CHIEF OFFICES, OLDBURY WORKS, NEAR BIRMINGHAM.
LONDON OFFICES, 6, STOREY'S GATE, GREAT GEORGE STREET, WESTMINSTER.

THE BIRMINGHAM WAGON COMPANY (LIMITED)
is PREPARED TO SUPPLY RAILWAY WAGONS OF EVERY DESCRIPTION, capable of carrying 6, 8, or 10 tons, at annual rentals, or for purchase on deferred payments, on advantageous terms. EDMUND FOWLER, Sec.
OFFICES, 3, NEWHALL STREET, BIRMINGHAM.

THE BEVERLEY IRON AND WAGON COMPANY (LIMITED)

MANUFACTURERS OF RAILWAY WAGONS, WROUGHT AND CAST IRON CARRIAGE and WAGON WHEELS, LURRIES, and ROAD WHEELS and AXLES OF EVERY DESCRIPTION.
PATENT WHEEL MANUFACTORY, BEVERLEY IRONWORKS, BEVERLEY, YORKSHIRE.

COAL CUTTING MACHINERY.

THE WEST ARDSLEY COMPANY having, by recently patented improvements, perfected their coal cutting machinery, worked by compressed air, and are NOW READY TO MAKE CONTRACTS for the CONSTRUCTION and USE of their MACHINES. The results of twelve months' experience in the working of these machines, by the West Ardsley Company, have proved most satisfactory, their use being found to CHEAPEN the COST and IMPROVE the average SIZE of the COAL, to LIGHTEN the LABOUR, and also to MODIFY the SANITARY CONDITION of the MINE. All communications to be made to Messrs. FIRTH, DONISTHORPE, and BOWEN, No. 8, Britannia-street, Leeds.

NOTICE.—THE WEST ARDSLEY COMPANY, having reason to believe that their patents are being infringed upon, hereby give notice that they will TAKE LEGAL PROCEEDINGS AGAINST ALL PARTIES who may MAKE FOR SALE, or USE ANY MACHINERY in the construction of which any such INFRINGEMENT is MADE.

EDWARDS'S PATENT MINERAL ORE AND COAL WASHING MACHINE.—This is by far the MOST ECONOMICAL, as well as the MOST PERFECT MACHINE MADE. Each machine is capable of washing 25 to 50 tons per diem, according to quality.—Full particulars, testimonials, &c., may be obtained from E. EDWARDS, Esq., C.E., 1, York-buildings, Adelphi, where a working model may be seen.

PAGE'S PATENT BOILER FLUID EFFECTUALLY REMOVES and PREVENTS the INCORUSTATION in STEAM BOILERS of ALL KINDS, whatever the quality of the water, DOES NOT INJURE the METAL, and SAVES FUEL.—For testimonials and references, apply to Messrs. BRETT and Co., sole manufacturers, 150, Leadenhall-street, London.

DANIEL COLLINGE AND SON'S PATENT

SPONGE CLOTHS.
We HAVE APPOINTED MR. ELLIS LEVER, of this city, SOLE AGENT for the SALE of OUR PATENT SPONGE CLOTHS, the MINING DISTRICTS of GREAT BRITAIN.

Manchester, March 5, 1864.
I shall be glad to SUPPLY SAMPLES and PRICES of DANIEL COLLINGE AND SON'S PATENT SPONGE CLOTHS, which are a VALUABLE SUBSTITUTE for COTTON WASTE in the CLEANING of ENGINES and MACHINERY.
23, Marsden-square, Manchester. ELLIS LEVER.

Adopted by the Governments of Great Britain, Spain, Denmark, Russia, Brazil, East and West Indies.

EASTON'S PATENT BOILER FLUID,

FOR REMOVING AND PREVENTING INCORUSTATION in STEAM BOILERS, LAND and MARINE.
P. S. EASTON and G. SPRINGFIELD,
Patentees and Sole Manufacturers,
37, 38, and 39, WAPPING WALL, LONDON, E.,
Or of their Agents in the principal towns of Great Britain and the Colonies.

NEW COMBINED TURBINE, WINDING, AND PUMPING MACHINERY.

MANUFACTURED BY GEORGE LOW, MILGATE IRONWORKS, NEWARK-UPON-TRENT.

Who respectfully begs to bring the above to the notice of the mining public, as an exceedingly cheap and easy method of applying water-power for the above purposes. The TURBINE, WINDING, and PUMPING MACHINERY are all fixed complete to one strong cast-iron bed plate, which can be placed in any situation without pit or excavation, and any height not exceeding 33 ft. from bottom of fall, the supply and suction pipe being all that is required to be connected to it, and can be brought in any direction. This combined machine can be easily removed when necessary.

G. Low begs also to state that the TURBINE is the most efficient and the cheapest method of applying water-power for mining purposes.
MANUFACTURER OF WINDING, PUMPING, CRUSHING, STAMPING MACHINERY, WINDING ENGINES, WATER WHEELS.

IMPROVED TURBINE WATER WHEELS CONSTRUCTED either to WORK VERTICALLY or HORIZONTALLY, and upon the MOST SCIENTIFIC and EFFECTIVE PRINCIPLE.

G. Low begs to recommend a special class of turbine adapted for extreme high falls (200 to 500 ft.), and consuming small quantity of water. This turbine will work with equal advantage without running at an excessive velocity. Also, MANUFACTURER OF IMPROVED BORING MACHINES for DRIVING ADITS.

CREASE'S PATENT EXCAVATING MACHINERY,

FOR SUPERSEDING the SLOW and EXPENSIVE USE of MANUAL LABOUR in SINKING SHAFTS, DRIVING LEVELS, TUNNELLING, &c., is guaranteed to drive through any rock of average hardness at a minimum rate of 1 in. per diem, and to sink shafts at the rate of 2 fms. in three days.
Mr. CREASE will undertake contracts for sinking shafts, driving levels, &c., at an enormous reduction of time and great saving in cost.
Applications to be addressed (for the present) to the patentee, Mr. E. S. CREASE, Tavistock, Devon.

By providing the power of calculating the time and cost to explore a certain depth and extent of ground, speculation in mining will be assimilated to commercial pursuits, and this unmistakable advantage—that when the ground has been once carefully and judiciously selected, and operations properly and systematically carried out for its development, there would be far less chance of unsatisfactory results than are met with by merchants and manufacturers in the usual routine of their business. As this important invention must beneficially interest the landowners, mine proprietors, merchants, and miners, we opine it will meet with immediate adoption.—*Mining Journal*.

ASSAYS AND ANALYSES OF EVERY DESCRIPTION

Conducted by JOHN MITCHELL, F.C.S., M.G.A. (Established 20 years).
Author of "Manual of Practical Assaying," "Metallurgical Papers," &c.
All communications and samples to be addressed (free) to Mr. MITCHELL, care of Mr. Clay 29, Great St. Helen's, London, E.C.

TO IRON and COAL MASTERS, MINING and QUARRY COMPANIES, &c.

FOR PREVENTING IRON FROM RUST, and WOOD FROM DECAY.

BRILLIANT JET BLACK, SUPERIOR TO PAINT in APPEARANCE, dries in less time, contains preservative qualities of the best description, and is economical in its use; one gallon, at 1s. is equal to 14 lbs. of paint, which costs 4s. For COLLIERY HEAD GEARING, RAILWAY WAGONS, BOILERS, CASTINGS, CANAL BOATS, &c., it is especially adapted. In casks containing 10, 15, and 20 cwts. each. In quantities of 1 ton and upwards, price £11 per ton.

TURPENTINE SUBSTITUTE.
GLOVER and Co. have now on hand a really splendid painting sample of spirits of turpentine substitute, a pure crystal, not more volatile than the genuine American turpentine, and quite innocuous to smell. Price, 2s. per gallon, in 30-gallon casks.

PETROLEUM.

This oil gives a pure, white, soft, and brilliant light, easily regulated, and portable. For works or public buildings, where gas is not desirable, the brilliancy and economy of the article are unequalled.

WASTE NO OIL.

Not liable to leak, and which economize space in the stores. From 600 gallons, 48 diameter by 84 in height, price £10 10s., down to 10 gallons, 15 diameter by 21 in height, price 10s., WITH EVERY VARIETY OF SIZE AND PRICE BETWEEN.

STRONG IRON BUCKETS.—2½ galls. .. 4s. 6d. 3 galls. 5s. 0d. 3½ galls. 5s. 6d. 4 galls. 6s. 0d.

WAGON GREASE.
GLOVER AND CO., No. 40, MANESTY LANE, LIVERPOOL.

International Exhibition, 1862—Prize Medal.



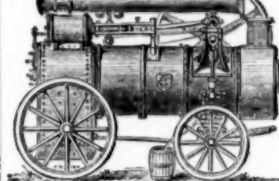
JAMES RUSSELL AND SONS

(the original patentees and first makers of wrought-iron tubes), of the CROWN PATENT TUBE WORKS, WEDNESBURY, STAFFORDSHIRE, have been AWARDED a PRIZE MEDAL for the "good work" displayed in their wrought-iron tubes and fittings.
Warehouse, 81, Upper Ground-street, London, S.

Prize Medal, International Exhibition, 1862.

RUSTON, PROCTOR, AND CO.'S CELEBRATED

PRIZE PORTABLE ENGINES are SPECIALLY ADAPTED for WINDING, PUMPING, SAWING, &c. These engines have, in public competition, won the highest honours. For ECONOMY in WORKING, LARGE ALLOWANCE of POWER in CYLINDER AREA and PROPORTIONATE SIZE of BOILER, STRENGTH of CONSTRUCTION, HIGH FINISH, and GENERAL EFFICIENCY, they are unrivalled, having recently been AWARDED THIRTEEN GOLD, SILVER, and BRONZE PRIZE MEDALS, and numerous other prizes.

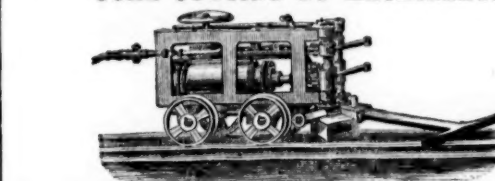


Messrs. A. Knowles and Sons write:—
Pendlebury Colliery, near Manchester, June 5, 1861.

GENTLEMEN.—We beg to inform you that we have now in use the portable engine of 8 horse power you supplied us with, and have great pleasure in informing you that it works well, and we are much pleased with the workmanship and finish of it.
We are, yours respectfully, ANDREW KNOWLES and SONS.

Illustrated, descriptive, and priced catalogues may be had on application to the Shear Ironworks, Lincoln.

COAL CUTTING BY MACHINERY.



MESSRS. RIDLEY AND CO. have, by recently PATENTED IMPROVEMENTS, COMPLETED their TRUNK COAL CUTTING MACHINE, WORKED BY COMPRESSED AIR, and are NOW PREPARED TO NEGOTIATE for the USE, and to SUPPLY MACHINES, which will be found to COMBINE SIMPLICITY of CONSTRUCTION with PORTABILITY and ECONOMY in WORKING. By the use of these machines a CONSIDERABLE SAVING of COAL is EFFECTED, and the COST of LABOUR MUCH REDUCED. Each machine will be guaranteed as to its capabilities, &c.
All applications to be made to Messrs. RIDLEY and Co., No. 11, South-street, Finsbury, London, E.C.

COLLIERY PROPRIETORS are CAUTIONED against PURCHASING or USING MACHINES, the construction of which will constitute an INFRINGEMENT of the ABOVE PATENT.

THOMAS TURTON AND SONS.

MANUFACTURERS OF
CAST STEEL FOR PUNCHES, TAPS, and DIES,
TURNING TOOLS, CHISELS, &c.
CAST STEEL PISTON RODS, CRANK PINS, CONNECTING RODS, STRAIGHT and CRANK AXLES, SHAFTS, and
FORGINGS OF EVERY DESCRIPTION.

DOUBLE SHEAR STEEL, BLISTER STEEL, SPRING STEEL, GERMAN STEEL.
Files MARKED T. TURTON.
EDGE TOOLS MARKED WM. GRAVES & SON.
Locomotive Engine, Railway Carriage and Wagon Springs and Buffers.

SHEAF WORKS and SPRING WORKS, SHEFFIELD.
LONDON WAREHOUSE, 35, QUEEN STREET, CANNON STREET, CITY, E.C.
where the largest stock in the world may be selected from.

MESSRS. KNOWLES AND BUXTON, CHESTERFIELD.

MANUFACTURERS OF PATENT TUBULAR TUYERES.



The PATENT TUBULAR TUYERE possesses GREAT ADVANTAGES over the ORDINARY TUYERES, both for its DURABILITY and EASY WORKING. A current of cold water going direct to the nozzle prevents their destruction, however much they may be exposed to the fire.

We repair them at half the first cost, making them equal in size to new ones, all parties returning them carriage paid.
No. 1 tuyere, 16 in. long 25s. each.
No. 2 " 18 " 32s. "
No. 3 " 20 " 36s. "
No. 4 " 22 " 40s. "
No. 5 " 24 " 44s. "
Delivered at Chesterfield station. Terms, nett cash quarterly.

PUBLIC TEST OF WIRE-ROPE.

THE SUPERIOR QUALITY of GARNOCK, BIBBY, AND CO.'S WIRE-ROPE was FULLY PROVED by a RIVAL MANUFACTURER at the LIVERPOOL PUBLIC TESTING MACHINE, on the 29th of October, 1860, on which occasion GARNOCK, BIBBY, AND CO.'S ropes were found to be the STRONGEST of all the TWELVE SAMPLES from different makers then tested, as reported in the papers of the day. For example:—
(Certified by Mr. William Macdonald, superintendent.)
Garnock, Bibby, and Co. Corresponding sizes from other manufacturers.

Sizes.	Tons c.	Tons c.	Tons c.
3¼ in.	18 5	16 10	11 10
2½ in.	8 15	7 15	5 0

Remaining sizes with similar results.
* Samples taken promiscuously from stock by a rival manufacturer's agent.
GARNOCK, BIBBY, AND CO.,
SWAN HEMP AND WIRE ROPE MANUFACTURERS,
LIVERPOOL.
FLAT and ROUND STEEL and IRON WIRE ROPES for MINES, &c., of SUPERIOR QUALITY.

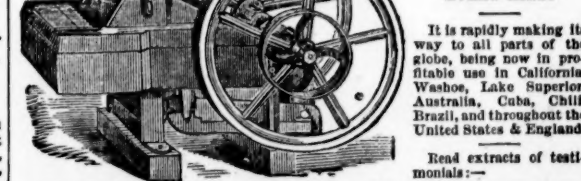
CORNISH CRUCIBLE and BLACK-LEAD POT MAKER,

JOHN JULEFF, FORE STREET, and PEDN-AN-DREA, REDRUTH.

BLAKE'S PATENT STONE BREAKER,

OR ORE CRUSHING MACHINE.

FOR REDUCING TO SMALL FRAGMENTS ROCKS, ORES, AND MINERALS OF EVERY KIND.



It is rapidly making its way to all parts of the globe, being now in profitable use in California, Washoe, Lake Superior, Australia, Cuba, Chili, Brazil, and throughout the United States & England.

Read extracts of testimonials:—
Alkali Works, near Wednesbury.—I at first thought the outlay too much for so simple an article, but now think it money well spent. WILLIAM HUNT.
Welsh Gold Mining Company, Dolgelly.—The stone breaker does its work admirably, crushing the hardest stones and quartz. W. DANIEL.

Our 15 by 7 in. machine has broken 4 tons of hard winstone in 20 minutes, for fine road metal, free from dust.
Messrs. OMD and MADDISON,
Stone and Lime Merchants, Darlington.

Kirkless Hall, near Wigan.—Each of my machines breaks from 100 to 120 tons of limestone or ore per day (10 hours), at a saving of 4d. per ton. JOHN LANCASTER.

Oreco, Ireland.—My crusher does its work most satisfactorily. It will break 10 tons of the hardest copper ore stone per hour. WM. G. ROBERTS.

General Frémont's Mines, California.—The 15 by 7 in. machine effects a saving of the labour of about 30 men, or \$75 per day. The high estimation in which we hold your invention is shown by the fact that Mr. Park has just ordered a third machine this estate. SILAS WILLIAMS.

For circulars and testimonials, apply to—
H. R. MARSDEN, SORO FOUNDRY,
MEADOW LANE, LEEDS.
Only maker in the United Kingdom.

THE MINING SHARE LIST

BRITISH DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Dividends Per Share.	Last Paid.
1300 Alderley Edge (cop.), Cheshire [L. 10]	10 0 0	—	—	—	9 13 0	0 15 0—Feb. 1864
4000 Badford United (copper), Tavistock	2 6 8	—	—	—	13 6 0	0 2 6—April, 1864
1248 Boscawell (tin), Cornwall, St. Just	6 15 0	—	—	—	1 5 0	0 5 0—May, 1864
200 Botallack (tin), Cornwall, St. Just	91 8 0	—	—	—	47 15 0	0 2 6—April, 1864
5000 Brough (lead), Cardigan [L. 25]	2 7 6	—	—	—	9 10 0	0 2 6—April, 1864
916 Cargill (silver-lead), Newlyn	15 7 32	—	—	—	7 15 0	0 10 0—May, 1864
1800 Carn Brea (copper), Illogan	15 0 0	—	—	—	280 10 0	0 2 6—June, 1864
2900 Clifford Amalgamated (cop.), Gwent	30 0 0	—	—	—	31 8 0	0 10 0—April, 1864
12000 Copper Miners of England	25 0 0	—	—	—	7 1/2 per cent.	—Half-yearly.
40000 Ditto (stock)	100 0 0	—	—	—	11 8 0	0 15 0—Mar. 1864
567 Cwm Erwin (lead), Cardiganshire [L. 7]	10 0 0	—	—	—	263 10 0	0 4 0—April, 1864
128 Cwmystwith (lead), Cardiganshire	60 0 0	—	—	—	913 0 0	0 12 0—May, 1864
1024 Devon Gt. Con. (cop.), Tavistock [S.E.]	1 0 0	—	—	—	763 10 0	0 7 0—May, 1864
358 Dolcoath (copper), Camborne	123 17 6	—	—	—	0 18 0	0 1 6—May, 1864
19300 Drake Wells (tin), Cornwall, Calstock	2 1 0	—	—	—	121 0 0	0 2 0—May, 1864
512 East Basset (cop.), Redruth [S.E.]	29 10 0	—	—	—	10 5 0	0 2 6—April, 1864
6144 East Carnon (copper), St. Cleer [S.E.]	2 14 6	—	—	—	95 10 0	0 2 0—April, 1864
300 East Doreen (lead), Cardiganshire	32 0 0	—	—	—	365 10 0	0 7 10—April, 1864
128 East Pool (tin), Cornwall, Pool, Illogan	24 5 0	—	—	—	1 10 0	0 10 0—May, 1864
1906 East Wheal Lovell (tin), Wendron	2 13 6	—	—	—	63 0 0	0 1 0—April, 1864
2800 Foxdale (lead) Isle of Man [L.]	25 0 0	—	—	—	1 4 6	0 4 0—May, 1864
5000 Frank Mills (lead), Christow	3 18 6	—	—	—	0 11 0	0 5 0—June, 1864
12500 Great Laxey (lead), Isle of Man [L.]	4 0 0	—	—	—	5 16 0	0 10 0—Nov. 1863
1798 Great Wheal Fortune (tin), Breage	15 8 0	—	—	—	3 19 6	0 12 0—Feb. 1864
5808 Great Wh. Vor (tin), Helston [S.E.]	40 0 0	—	—	—	5 0 0	0 5 0—Feb. 1864
119 Great Work (tin), Germoe	100 0 0	—	—	—	418 10 0	0 15 0—Feb. 1864
1024 Herodfoot (id.), near Liskeard [S.E.]	8 10 0	—	—	—	2 13 0	0 10 0—Mar. 1864
400 Lisburne (lead), Cardiganshire, Wales	15 18 0	—	—	—	145 10 0	0 10 0—Mar. 1864
9000 Marke Valley (copper), Cardigan	4 10 6	—	—	—	16 19 7	0 12 3—Jan. 1864
1800 Minera Mining Co. [L.] (id.), Wrexham	25 0 0	—	—	—	0 4 0	0 2 0—April, 1864
20000 Mining Co. of Ireland (cop., lead, coal)	7 0 0	—	—	—	0 6 0	0 1 0—Mar. 1864
40000 Nant-y-fon (lead), Montgomery	30 0 0	—	—	—	0 8 0	0 2 6—Feb. 1864
250 Nant-y-fon (lead), Montgomery	30 0 0	—	—	—	36 19 0	0 2 6—Feb. 1864
6000 New Birch Tor and Vithor Cons. (id.)	1 0 0	—	—	—	102 10 0	0 10 0—Mar. 1863
5936 North Trekerby (copper), St. Agnes	1 0 0	—	—	—	7 19 6	0 10 0—Nov. 1863
6401 Par Consols (cop.), St. Biazey [S.E.]	1 2 6	—	—	—	1 0 0	0 1 0—July, 1863
307 Parys Mines (copper), Anglesey [L.]	60 0 0	—	—	—	73 5 0	0 1 0—May, 1864
1773 Polberron (tin), St. Agnes	15 0 0	—	—	—	0 10 0	0 1 6—May, 1863
512 Polberron (tin), St. Agnes	8 0 0	—	—	—	370 13 6	0 5 0—Nov. 1863
112 Providence (tin), Uny Lelant [S.E.]	10 6 40	—	—	—	490 10 0	0 10 0—Mar. 1864
6000 Rosewell Hill and Ransom United	2 10 0	—	—	—	6 2 6	0 10 0—Mar. 1864
412 South Carnon (cop.), St. Cleer [S.E.]	8 0 0	—	—	—	25 8 0	0 5 0—May, 1864
512 South Tolgus (cop.), Redruth, Cornwall	8 0 0	—	—	—	409 0 0	0 10 0—June, 1864
496 St. Wh. Frances (cop.), Illogan [S.E.]	18 18 9	—	—	—	3 0 0	0 10 0—Oct. 1863
4000 St. Day United (tin), Redruth	14 0 0	—	—	—	14 10 0	0 10 0—Sept. 1864
940 St. Ives Consols (tin), St. Ives	8 0 0	—	—	—	1 13 6	0 5 0—April, 1864
6000 Tinctor (cop.), Pool, Illogan [S.E.]	9 0 0	—	—	—	9 15 0	0 7 6—April, 1864
4200 Vigna and Clogau (copper), Illogan [S.E.]	1 10 0	—	—	—	63 7 6	0 1 0—May, 1864
6000 West Basset (copper), Illogan [S.E.]	1 10 0	—	—	—	243 3 0	0 5 0—May, 1864
5000 W. Chiverton (id.), Farnham [S.E.]	8 0 0	—	—	—	174 15 0	0 4 0—June, 1864
256 West Doreen (copper), Gwennap	38 10 0	—	—	—	49 12 6	0 12 6—May, 1864
400 W. Wh. Seton (cop.), Camborne [S.E.]	47 10 0	—	—	—	0 15 0	0 5 0—Nov. 1863
512 Wheal Basset (copper), Illogan [S.E.]	6 2 6	—	—	—	14 11 0	0 6 0—April, 1864
1000 Wheal Basset and Grylls (tin)	7 0 0	—	—	—	—	—
1024 Wheal Grylls (tin), Farnham	2 4 0	—	—	—	—	—
512 Wheal Jane (silver-lead), Ken	3 10 0	—	—	—	—	—
4295 Wheal Kitty (tin), St. Agnes	6 4 6	—	—	—	—	—
1024 Wheal Kitty (tin), Uny Lelant [S.E.]	2 0 0	—	—	—	—	—
906 Wh. Margaret (tin), Uny Lelant [S.E.]	9 12 6	—	—	—	—	—
1024 Wh. Mary Ann (id.), Menheniot [S.E.]	8 0 0	—	—	—	—	—
80 Wheal Owles (tin), St. Just, Cornwall	70 0 0	—	—	—	—	—
396 Wheal Seton (tin), Cornwall	58 10 0	—	—	—	—	—
1000 Wh. Trelawny (sil.-id.), Liskeard [S.E.]	6 17 0	—	—	—	—	—
2644 Wheal Tremayne (tin), Gwennap	6 11 3	—	—	—	—	—
7000 Wicklow (copper), L. Wicklow	2 10 0	—	—	—	—	—

* Dividends paid every two months. † Dividends paid every three months.

BRITISH MINES WITH DIVIDENDS IN ABEYANCE.

240 Boscawen (tin), St. Just	20 10 0	—	—	—	36 10 0	1 0 0—Mar. 1862
3000 Chiverton (lead), Farnham [S.E.]	5 0 0	—	—	—	85 0 0	0 2 0—June, 1862
256 Conduvor (cop.), tin, Camborne	45 0 0	—	—	—	1 7 0	0 7 0—May, 1862
2450 Cook's Kitchen (copper), Illogan	17 15 0	—	—	—	2 7 6	—Sept. 1862
1024 Copper Hill (copper), Redruth	12 0 0	—	—	—	7 12 0	0 4 0—July, 1862
1055 Cradock Moor (copper), St. Cleer	8 0 0	—	—	—	147 0 0	0 5 0—June, 1862
3000 Derwent Mines (sil.-lead), Durston	30 0 0	—	—	—	0 17 6	0 2 6—Feb. 1862
4076 Devon and Cornwall (cop.), Tavistock	6 2 6	—	—	—	41 9 8	0 2 6—Jan. 1863
3000 Dyrwgan (lead), Wales	6 2 6	—	—	—	7 18 6	0 5 0—Dec. 1863
940 Fowey Consols (copper), Twardreath	4 0 0	—	—	—	0 3 0	0 1 6—Mar. 1862
6000 Great South Tolgus, Redruth	0 14 6	—	—	—	1091 0 0	0 5 0—May, 1862
10240 Gunnis Lake (Clitters' Adit)	0 2 0	—	—	—	18 18 1	0 7 6—Aug. 1862
160 Levant (copper), tin, St. Just	2 10 0	—	—	—	0 10 4	0 8 8—Mar. 1862
640 Mount Pleasant (lead), Mold	4 0 0	—	—	—	9 15 0	0 5 0—Dec. 1862
5000 Oreside (lead), Flintshire	1 10 0	—	—	—	7 0 0	0 10 0—Dec. 1862
2000 South Exmouth (lead), Christow	1 10 0	—	—	—	11 0 0	0 2 0—Mar. 1862
2800 Sperron Moor (tin), Cornwall, St. Just	31 17 0	—	—	—	—	—
872 Trelawny Consols (tin), St. Ives	13 10 0	—	—	—	—	—
10000 Trumpet Consols (tin), near Helston	11 10 0	—	—	—	—	—
12000 Twelve Apostles Amal. (id.), Wrexham	1 0 0	—	—	—	—	—
1024 Wendron Consols (tin), Wendron	18 3 10	—	—	—	—	—
60 West Burton Gill (lead), Wrexham	5 0 0	—	—	—	—	—
1024 West Carnon (cop.), Liskeard [S.E.]	5 0 0	—	—	—	—	—
1024 Wheal Friendship (copper), Devon	5 0 0	—	—	—	—	—
6400 West Fowey Consols (tin and copper)	7 10 0	—	—	—	—	—
400 Wheal Mary (tin), Lelant	38 2 6	—	—	—	—	—

FOREIGN DIVIDEND MINES.

20000 Australian (cop.), S. Australia [S.E.]	7 7 6	—	—	—	0 1 0	0 1 0—Dec. 1863
2464 Burra Burra (cop.), S. Australia	5 0 0	—	—	—	315 0 0	0 8 0—Mar. 1864
6000 Central American (silver), U.S.	5 0 0	—	—	—	4 6 8	0 14 10—Dec. 1863
12000 Cobro Copper Co. (cop.), Chile [S.E.]	40 0 0	—	—	—	99 12 0	1 0 0—Jan. 1864
100000 Don Pedro No. Del Rey [L.] [S.E.]	0 10 0	—	—	—	0 0 0	0 0 0—Dec. 1863
70000 English and Australian [S.E.]	5 0 0	—	—	—	1 10 0	0 2 6—Feb. 1864
16000 East Indian Coal, Calcutta [L.]	10 0 0	—	—	—	7 1/2 per cent.	—Yearly.
25000 Fortuna (lead), Spain [L.] [S.E.]	2 0 0	—	—	—	0 11 4	0 3 0—Feb. 1864
25000 Gen. Mining Assoc., Nova Scotia [S.E.]	30 0 0	—	—	—	19 15 0	0 10 0—June, 1863
6000 Kapunda Mining Co., Australia [S.E.]	0 0 0	—	—	—	0 11 0	0 1 0—Jan. 1863
16000 Llaneros (copper), Venezuela [S.E.]	3 0 0	—	—	—	9 11 2	0 5 0—Oct. 1863
10000 Pontefract (sil.-lead), France [S.E.]	30 0 0	—	—	—	0 11 0	0 1 0—Jan. 1864
92500 Port Phillip (gold), Clunes [S.E.]	1 0 0	—	—	—	0 11 0	0 1 0—Jan. 1864
11000 St. John del Rey [L.] [S.E.]	15 0 0	—	—	—	61 5 0	0 3 0—Dec. 1863
43174 Unit. Mexican (sil.), Mexico [S.E.]	28 5 0	—	—	—	2 14 0	0 5 0—May, 1864
10000 Vancouver (coal) [L.] [S.E.]	5 0 0	—	—	—	0 10 0	0 5 0—May, 1864
20000 West Canada Mining Company [L.]	1 0 0	—	—	—	0 7 0	0 3 0—Nov. 1863
45000 Yunnan Mining Co. (cop.), S. A. [L.] [S.E.]	3 0 0	—	—	—	0 5 0	0 5 0—Aug. 1863

FOREIGN MINES WITH DIVIDENDS IN ABEYANCE.

10000 Alten and Quenangen Unt. (cop.) [L.] [S.E.]	4 10 0	—	—	—	4 5 0	0 15 0—Nov. 1863
10000 Copalco Mining Company, Chile [S.E.]	16 0 0	—	—	—	6 18 0	0 10 0—Nov. 1862
10000 Gt. Barrier Land, Min. & N. Z. [L.] [S.E.]	10 0 0	—	—	—	15 per cent.	—May, 1862
10000 Lusitania (of Portugal) [S.E.]	2 0 0	—	—	—	0 19 0	0 1 0—Feb. 1862
109815 Mariquita and New Granada [S.E.]	1 0 0	—	—	—	0 9 6	0 1 6—July, 1862

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
10000 Anglo-Brazilian (gold) [L.] [S.E.]	—	—	—	—	—
30000 Amalioles (lead), Spain [L.]	—	—	—	—	—
20000 Bearitz Tin Streaming Company [L.]	—	—	—	—	—
15000 Cape Copper Mining Company [L.] [S.E.]	—	—	—	—	—
50000 Capula (silver), Mexico [L.] [S.E.]	—	—	—	—	—
17000 Central African (copper) [L.] [S.E.]	—	—	—	—	—
60000 Clarendon Consols (copper), Jamaica [S.E.]	—	—	—	—	—
10000 Copalco Smelting [L.] [S.E.]	—	—	—	—	—
75000 Dun Mountain (copper), New Zealand [L.] [S.E.]	—	—	—	—	—
50000 East del Rey (gold), Brazil [L.] [S.E.]	—	—	—	—	—
30000 East Kongberg Native Silver Mining Co. of Norway [L.]	—	—	—	—	—
15000 El Chico Mining and Reduction (silver) [L.]	—	—	—	—	—
20000 Elze Colliery Company, Bohemia [L.]	—	—	—	—	—
30000 Feltz Colliery and Harcourt (copper), S. E. [L.]	—	—	—	—	—
8000 English and Canadian Mining Company [L.]	—	—	—	—	—
40000 Fortuna (copper), West Australia [L.]	—	—	—	—	—
60000 Frontino and Bolivia (gold), New Granada [L.] [S.E.]	—	—	—	—	—
80000 Great Northern (copper), South Australia [L.] [S.E.]	—	—	—	—	—
24000 Hindostan (copper), Bengal [L.] [S.E.]	—	—	—	—	—
4000 Hope Silver-Lead and Copper Mining Co. [L.] [S.E.]	—	—	—	—	—
10000 Karibits Colliery Company [L.]	—	—	—	—	—
30000 Lagunazo (sulphur, copper), Potosi [L.]	—	—	—	—	—
100000 Montes Aures (gold), Brazil [L.] [S.E.]	—	—	—	—	—
2000 New Burra Burra (copper) (Australia)	—	—	—	—	—
10000 New Grand Duchy of Baden (silver-lead), near Freiberg	—	—	—	—	—
60000 North Rhine Copper of South Australia [L.] [S.E.]	—	—	—	—	—
50000 Nova Scotia (land and gold) [L.] [S.E.]	—	—	—	—	—
10000 Pachusa Silver Mining Company, Mexico [L.]	—	—	—	—	—
30000 Panatello Colliery [L.]	—	—	—	—	—
6000 Peel River Lead and Mineral [L.]	—	—	—	—	—
25000 Quebrada (copper), Venezuela [L.] [S.E.]	—	—	—	—	—
10000 San Roque (lead), Spain	—	—	—	—	—
60000 Santa Barbara (gold), Brazil [L.] [S.E.]	—	—	—	—	—
120000 Scottish Australian Mining Company [L.] [S.E.]	—	—	—	—	—
15000 South Europe Mining Company, Spain [L.] [S.E.]	—	—	—	—	—
12000 Teplitz Colliery Co., Bohemia [L.] [S.E.]	—	—	—	—	—
8000 Valdemar Mining Company [L.]	—	—	—	—	—
50000 Valianzasca (gold), Italy [L.] [S.E.]	—	—	—	—	—
45000 Victor Emanuel (copper), Italy [L.]	—	—	—	—	—
1000 Western Africa Malachite (copper) [L.]	—	—	—	—	—
12000 Wheal Ellen (copper), South Australia [L.]	—	—	—	—	—
90000 Worthing (copper), South Australia [L.] [S.E.]	—	—	—	—	—